

**PDP-11/45
system
engineering drawings**

DRAWING DIRECTORY

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CUSTOMER PRINT SET INDEX

| | SEQUENCE | | SEQUENCE |
|----------------------------|----------|------------------------------|----------|
| DRAWING DIRECTORY | | B-DD-11/45-0 (SHT. ONE ONLY) | |
| CONSOLE PHYSICAL LAYOUT | | E-IA-5409684-0-0 | |
| CIRCUIT SCHEMATIC | | D-CS-5409684-0-1 | |
| DRAWING DIRECTORY | | B-DD-KB11-0 (SHT. ONE ONLY) | |
| POWER SYSTEM CONFIGURATION | | D-IC-11/45-0-1 | |
| 11/45 BACK PANEL PC BOARD | | D-IC-11/45-0-2 | |
| WIRE LIST | | K-WL-7009540-0-2 | |
| DRAWING DIRECTORY | | B-DD-861-0 (SHT. ONE ONLY) | |
| DRAWING DIRECTORY | | B-DD-H742-0 (SHT. ONE ONLY) | |
| DRAWING DIRECTORY | | B-DD-H744-0 (SHT. ONE ONLY) | |
| DRAWING DIRECTORY | | B-DD-H745-0 (SHT. ONE ONLY) | |
| DRAWING DIRECTORY | | B-DD-H746-0 (SHT. ONE ONLY) | |
| CIRCUIT SCHEMATIC | | E-CS-H754-0-1 | |
| G772-OPTION HARNESS | | E-IA-7009562-0-0 | |
| ACCESSORY LIST | | A-AL-11/45-0-3 | |
| ARRANGEMENT DRAWING | | D-AR-11/45-0-4 | |
| ARRANGEMENT PARTS LIST | | C-PL-11/45-0-4 | |
| DRAWING DIRECTORY | | B-DD-DL11-1 | |

THIS IS PRINT SET

| UNIT VARIATIONS | | PRINT SET | | |
|-----------------|-----------------------------|-----------|--|--|
| VAR | TITLE | 11/45-1 | | |
| 11/45-CA | BASIC ASSY (PDP-11/45) 115V | X | | |
| 11/45-CB | BASIC ASSY (PDP-11/45) 230V | X | | |
| 11/45-CC | BASIC ASSY + LA3Ø 115V | X | | |
| 11/45-CD | BASIC ASSY + LA3Ø 230V | X | | |
| 11/45-CE | BASIC ASSY + VTØ5B 115V | X | | |
| 11/45-CF | BASIC ASSY + VTØ5B 230V | X | | |
| 11/45-CH | BASIC ASSY + LA3Ø 115V | X | | |
| 11/45-CJ | BASIC ASSY + LA3Ø 230V | X | | |
| 11/45-CK | BASIC ASSY + VTØ5B 115V | X | | |
| 11/45-CL | BASIC ASSY + VTØ5B 230V | X | | |
| 11/45-FA | BASIC ASSY 115V | X | | |
| 11/45-FB | BASIC ASSY 230V | X | | |
| 11/45-GA | BASIC ASSY + LA3Ø 115V | X | | |
| 11/45-GB | BASIC ASSY + LA3Ø 230V | X | | |
| 11/45-GE | BASIC ASSY + LA3Ø 115V | X | | |
| 11/45-GF | BASIC ASSY + LA3Ø 230V | X | | |

| REVISIONS | REV | Y | Z |
|-----------|----------|----------|----------|
| | DATE | 3/74 | 6/74 |
| | CHG. NO. | 11/45-57 | 11/45-58 |

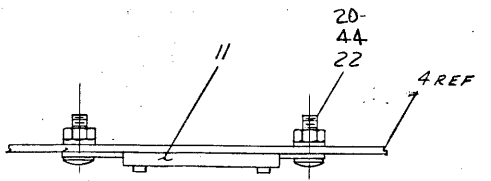
| USED ON OPTION/MODEL | DRN. R. COOK | DATE 4/72 | TITLE | | | | |
|----------------------|--|--|-----------------------|------|---------|--|-----|
| PDP-11 | CHK'D. <td>DATE <td colspan="4" rowspan="4">BASIC ASSY (PDP11/45)</td> </td> | DATE <td colspan="4" rowspan="4">BASIC ASSY (PDP11/45)</td> | BASIC ASSY (PDP11/45) | | | | |
| | R. COOK <td>DATE 4/72</td> | DATE 4/72 | | | | | |
| | PROJ ENG. <td>DATE 4/72</td> | DATE 4/72 | | | | | |
| | B. DELAGI <td>DATE 4/72</td> | DATE 4/72 | | | | | |
| | PROD. <td>DATE 5/72 <th>SIZE</th> <th>CODE</th> <th colspan="2">NUMBER</th> <th>REV</th> </td> | DATE 5/72 <th>SIZE</th> <th>CODE</th> <th colspan="2">NUMBER</th> <th>REV</th> | SIZE | CODE | NUMBER | | REV |
| | A. HIRSCH <td>DATE 5/72 <td>B</td> <td>DD</td> <td colspan="2">11/45-0</td> <td>Z</td> </td> | DATE 5/72 <td>B</td> <td>DD</td> <td colspan="2">11/45-0</td> <td>Z</td> | B | DD | 11/45-0 | | Z |
| | FIELD SERV. <td>DATE 5/72 <th colspan="2">DIST</th> <td colspan="3"></td> </td> | DATE 5/72 <th colspan="2">DIST</th> <td colspan="3"></td> | DIST | | | | |
| SHEET 1 OF 4 | ART ZINS <td>5/72</td> <td colspan="5"></td> | 5/72 | | | | | |

DEC 16-13251-1062-1A-R972

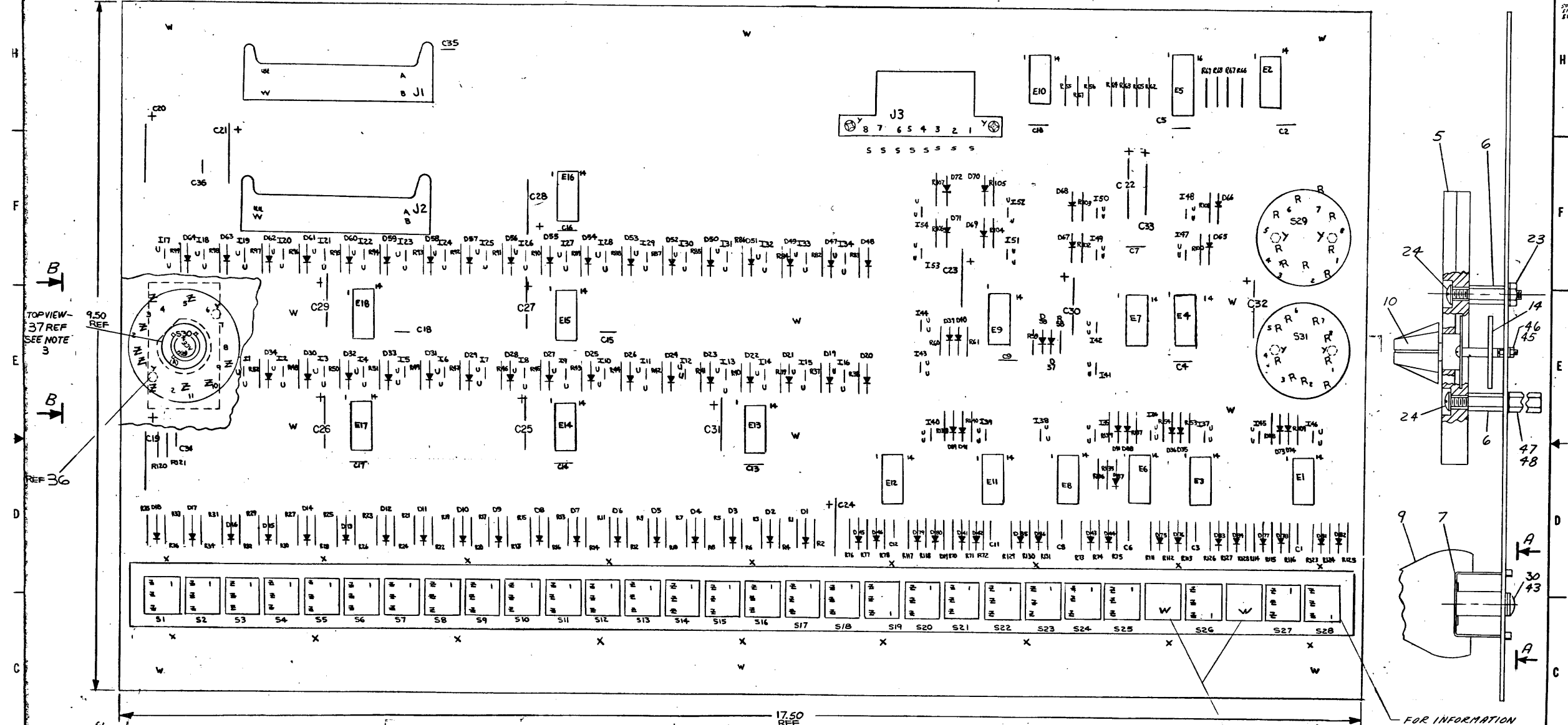
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| KNOB LOCATIONS | |
|----------------|--|
| ITEM NO. | REFERENCE |
| 8 | S1-S3, S7-S9, S13-S15, S20, S22, S24, S26, S28 |
| 40 | S4-S6, S10-S12, S16-S18, S21, S23, S25, S27 |
| 41 | S19 |

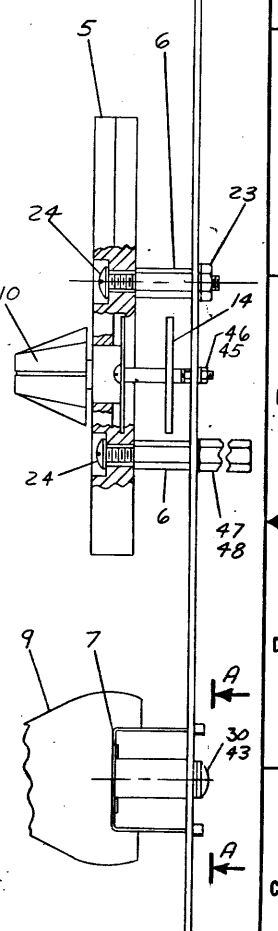
NOTES CONT
 3. IN ORDER TO GET THE PROPER ALIGNMENT BETWEEN ROTARY SWITCH #17 AND POWER LOCK #37, MOUNT ITEM #17 ON P.C. BOARD AND TURN SHAFT C'CLOCKWISE (LEFT) TO STOP. MOUNT ITEM #37 TO SUPPORT BRACKET ITEM #5 WITH 'D' HOLE IN POSITION INDICATED. ROTATE KEY POSITION INDICATED AS 'B' OF ITEM #37 TO LINE UP WITH KEY POSITION INDICATED AS 'A' OF ITEM #37.



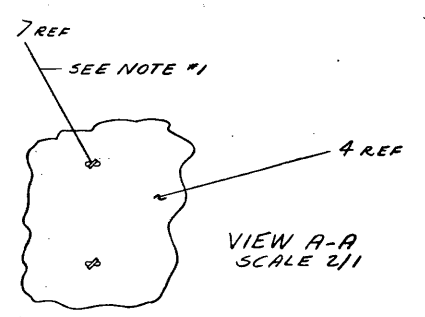
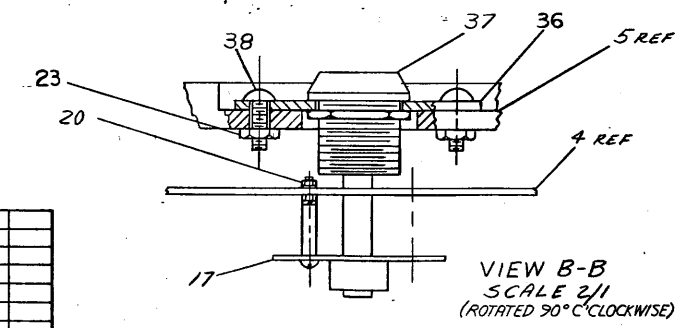
NOTES
 1. AFTER ASSEMBLING ITEM #7 TO ITEM #4, THE TABS OF ITEM #7 ARE TO BE TWISTED AS SHOWN IN VIEW A-A.
 2. ON S1-S19, S26, S28, THE SWITCH ARM IS TO FLIP UP. THE SWITCH ARM TO FLIP DOWN ON 20-25/27.



TOPVIEW - 37 REF SEE NOTE 3
 REF 36
 9.50 REF



FOR INFORMATION ON COLOR OF KNOB SEE TABLE



SEE SHEET 2 FOR PARTS LIST

| IC TYPE | GND | +5V | ITEM NO. | AWG | FROM PT | TO PT |
|------------------|-----|-----|----------|-----|---------|-------|
| IC PIN LOCATIONS | | | | | | |
| JUMPER LIST | | | | | | |

| DATE | BY | REV |
|----------|------------|-----|
| 11/17/72 | J. SWANSON | 1 |
| 11/17/72 | J. SWANSON | 2 |
| 11/17/72 | J. SWANSON | 3 |
| 11/17/72 | J. SWANSON | 4 |
| 11/17/72 | J. SWANSON | 5 |
| 11/17/72 | J. SWANSON | 6 |
| 11/17/72 | J. SWANSON | 7 |
| 11/17/72 | J. SWANSON | 8 |
| 11/17/72 | J. SWANSON | 9 |
| 11/17/72 | J. SWANSON | 10 |
| 11/17/72 | J. SWANSON | 11 |
| 11/17/72 | J. SWANSON | 12 |
| 11/17/72 | J. SWANSON | 13 |
| 11/17/72 | J. SWANSON | 14 |
| 11/17/72 | J. SWANSON | 15 |
| 11/17/72 | J. SWANSON | 16 |
| 11/17/72 | J. SWANSON | 17 |
| 11/17/72 | J. SWANSON | 18 |
| 11/17/72 | J. SWANSON | 19 |
| 11/17/72 | J. SWANSON | 20 |
| 11/17/72 | J. SWANSON | 21 |
| 11/17/72 | J. SWANSON | 22 |
| 11/17/72 | J. SWANSON | 23 |
| 11/17/72 | J. SWANSON | 24 |
| 11/17/72 | J. SWANSON | 25 |
| 11/17/72 | J. SWANSON | 26 |
| 11/17/72 | J. SWANSON | 27 |
| 11/17/72 | J. SWANSON | 28 |
| 11/17/72 | J. SWANSON | 29 |
| 11/17/72 | J. SWANSON | 30 |
| 11/17/72 | J. SWANSON | 31 |
| 11/17/72 | J. SWANSON | 32 |
| 11/17/72 | J. SWANSON | 33 |
| 11/17/72 | J. SWANSON | 34 |
| 11/17/72 | J. SWANSON | 35 |
| 11/17/72 | J. SWANSON | 36 |
| 11/17/72 | J. SWANSON | 37 |
| 11/17/72 | J. SWANSON | 38 |
| 11/17/72 | J. SWANSON | 39 |
| 11/17/72 | J. SWANSON | 40 |
| 11/17/72 | J. SWANSON | 41 |
| 11/17/72 | J. SWANSON | 42 |
| 11/17/72 | J. SWANSON | 43 |
| 11/17/72 | J. SWANSON | 44 |
| 11/17/72 | J. SWANSON | 45 |
| 11/17/72 | J. SWANSON | 46 |
| 11/17/72 | J. SWANSON | 47 |
| 11/17/72 | J. SWANSON | 48 |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|---------------------------------|-----------------|-------------|----------|----------|
| ETCH BOARD REV D | | | | |
| PARTS LIST | | | | |
| ETCH BOARD ASSY (11/45 CONSOLE) | | | | |
| SEMICONDUCTOR CONVERSION CHART | | | | |
| EQUIPMENT CORPORATION | | | | |
| SCALE 2/1 | | | | |
| SHEET 1 OF 2 | | | | |

11/45409584-0-0

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| | | | | | | | | |
|--|-------------|-----|--|--|--|--|--|--|
| DEC 9318 | B | 16 | | | | | | |
| IC TYPE | GND | +5V | | | | | | |
| GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE. | | | | | | | | |
| IC PIN LOCATIONS | JUMPER LIST | | | | | | | |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|---|------------------------------|------------------|----------|
| 1 | R120 | RES. 68 1/4W 10% | 1300221 | 51 |
| 1 | R121 | RES. 56 1/4W 10% | 1301429 | 50 |
| 3 | | LOCKWASHER INT TOOTH #6 | 9006633 | 49 |
| 3 | | SPACER .25 AF #6-32X8BL6 | 9006861 | 48 |
| 4 | | LOCKWASHER #2 INT TOOTH | 9006631 | 46 |
| 4 | | NUT, HEX #2-56 | 9006555 | 45 |
| 2 | | SCR, PHL HD PAN #4-40X.38 | 9006011-1 | 44 |
| 2 | | LOCKWASHER #8 INT TOOTH | 9006634 | 43 |
| REF | | ASSY, DRILLING HOLE LAYOUT | B-M-540984-0-5 | 42 |
| 1 | | KNOB, SWITCH GRAY | D-PS-121076-3-0 | 41 |
| 12 | | KNOB, SWITCH MAGENTA | D-PS-121076-2-0 | 40 |
| 1 | E8 | I.C. DEC 7404 | 1909686 | 39 |
| 2 | | SCR, PHL PAN #6-32X.38L6 | 9006022-1 | 38 |
| 1 | | POWER LOCK | 1210754 | 37 |
| 1 | | STRAP, LOCK MTE | B-1A-7409909-00 | 36 |
| 1 | E9 | I.C. MC 3001 | 1909514 | 35 |
| 7 | E7, E13-E18 | I.C. DEC 7416 | 1909928 | 34 |
| 1 | E5 | I.C. DEC 9318 | 1910454 | 33 |
| 2 | E2, E4 | I.C. DEC 7417 | 1909929 | 32 |
| 6 | E1, E3, E6, E10-E12 | I.C. DEC 7400 | 1905375 | 31 |
| 2 | | #32 X 1/8 SELF TAPPING SCR. | 9008143 | 30 |
| 58 | R37-R38, R58-R61, R82-R109, R37-R40 | RES. 220 JL 1/4W, 10% | 1300275 | 29 |
| 76 | R1-R36, R55-R57, R62-R78, R11-R111, R123-R131, R135, R136 | RES. 2.2K 1/4W, 10% | 1300418 | 28 |
| 15 | C17-C33 | CAP. 6.8UF 35V 20% STANT | 1000067 | 27 |
| 21 | C1-C16, C34-C36 | CAP. .01UF 100V 20% | 1001610 | 26 |
| 91 | D1-D71 | DIODE 0669 | 1100114 | 25 |
| 6 | | SCR, PHL PAN #6-32X.50L6 | 9006024-1 | 24 |
| 5 | | NUT, KEPS #6-32 | 9006560 | 23 |
| 2 | | WASHER, FIBER N.H.S.M.T.H.24 | 9006683 | 22 |
| 4 | | NUT, NYLON #4-40 | 9007992 | 20 |
| 108 | | LAMP SOCKET | 9007812 | 19 |
| 54 | I1-I54 | LAMP 23096 HUDSON BLUE | 1209219 | 18 |
| 1 | S30 | SWITCH ROTARY (LEDER)SAS | 1210753 | 17 |
| 8 | S19-S22, S25-S28 | SWITCH SPDT MOMENTARY (GR) | 1210841 | 16 |
| 20 | S1-S18, S23, S24 | SWITCH SPDT (GR) | 1210840 | 15 |
| 2 | S27, S31 | SWITCH ROTARY (LEDER)BAS | 1210775 | 14 |
| 2 | J1, J2 | CONN. RIGHT ANGLE HEADER | 1209941 | 13 |
| 8 | | PIN SOCKET AMP G13204 | 1209456 | 12 |
| 1 | J3 | PIN HOUSING | 1209390-00 | 11 |
| 2 | | KNOB, FUNCTION BLK | 1210773 | 10 |
| 2 | | KNOB, DUMMY GRAY | D-PS-1210825-0-9 | 9 |
| 14 | | KNOB, SWITCH ROSE | D-PS-121076-1-0 | 8 |
| 1 | | SUPPORT, SWITCH | D-MD-7409270-1-0 | 7 |
| 6 | | STANDOFF, HALF/FEMALE #8 | 9009120-2 | 6 |
| 1 | | SUPPORT, INDICATOR PANEL | D-MD-7409985-0-0 | 5 |
| 1 | | ETCHED CIRCUIT BOARD | 5009683 | 4 |
| REF | | MODULE ECU HISTORY | B-MH-5409684-0-3 | 3 |
| REF | | CIRCUIT SCHEMATIC | D-CS-5409684-0-1 | 2 |
| REF | | X-Y COORDINATE HOLE LOC | K-CO-5409184-0-1 | 1 |

ETCH BOARD REV: _____

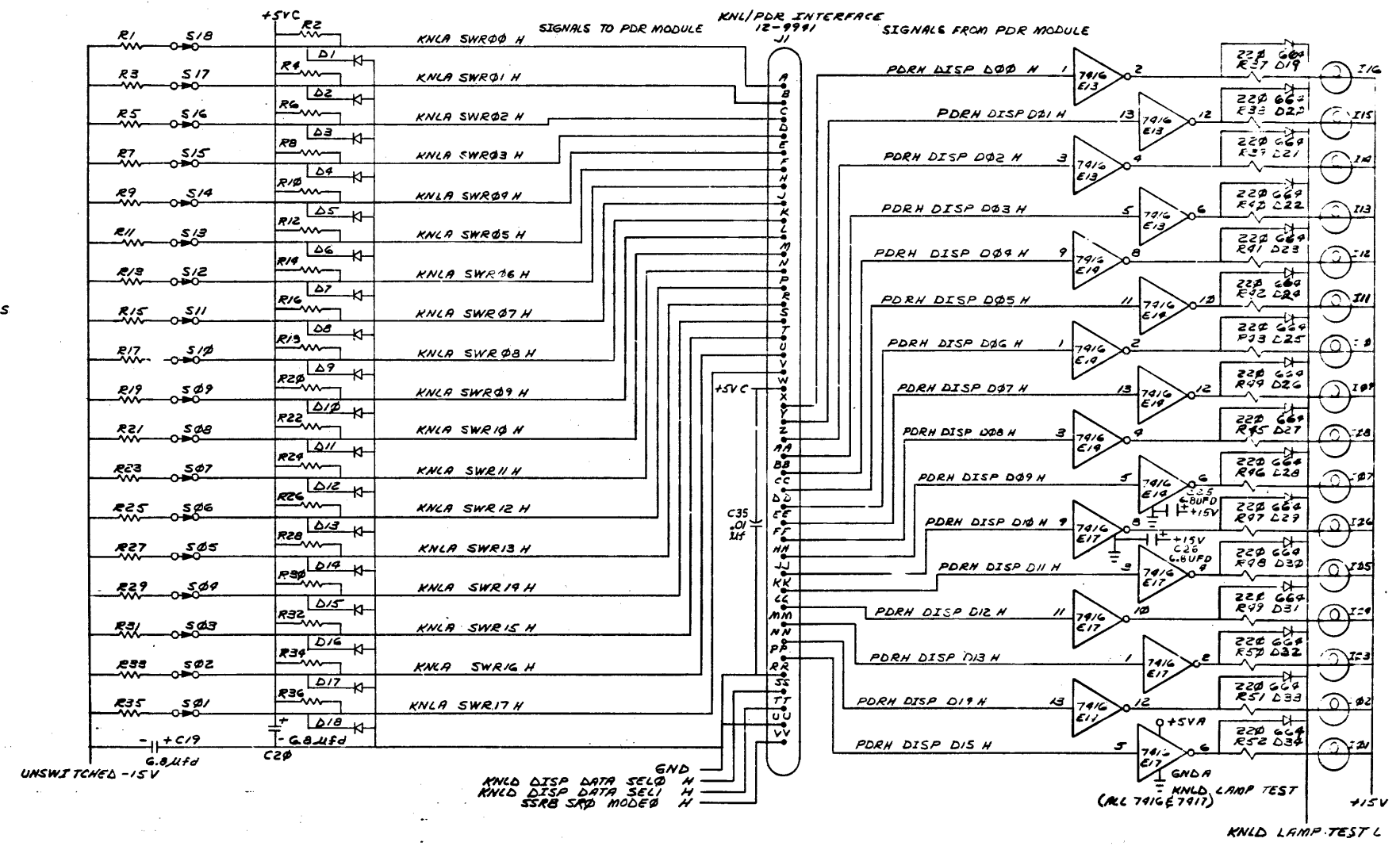
| DATE | BY | REVISIONS |
|------|----|-----------|
| | | |

DATE: 12/18/72
 CHECKED: [Signature]
 TITLE: ETCH BOARD ASSY (1145 CONSOLE)
 EIA NO. 5409684-0-0
 SCALE: 2/1
 SHEET: 2 OF 2

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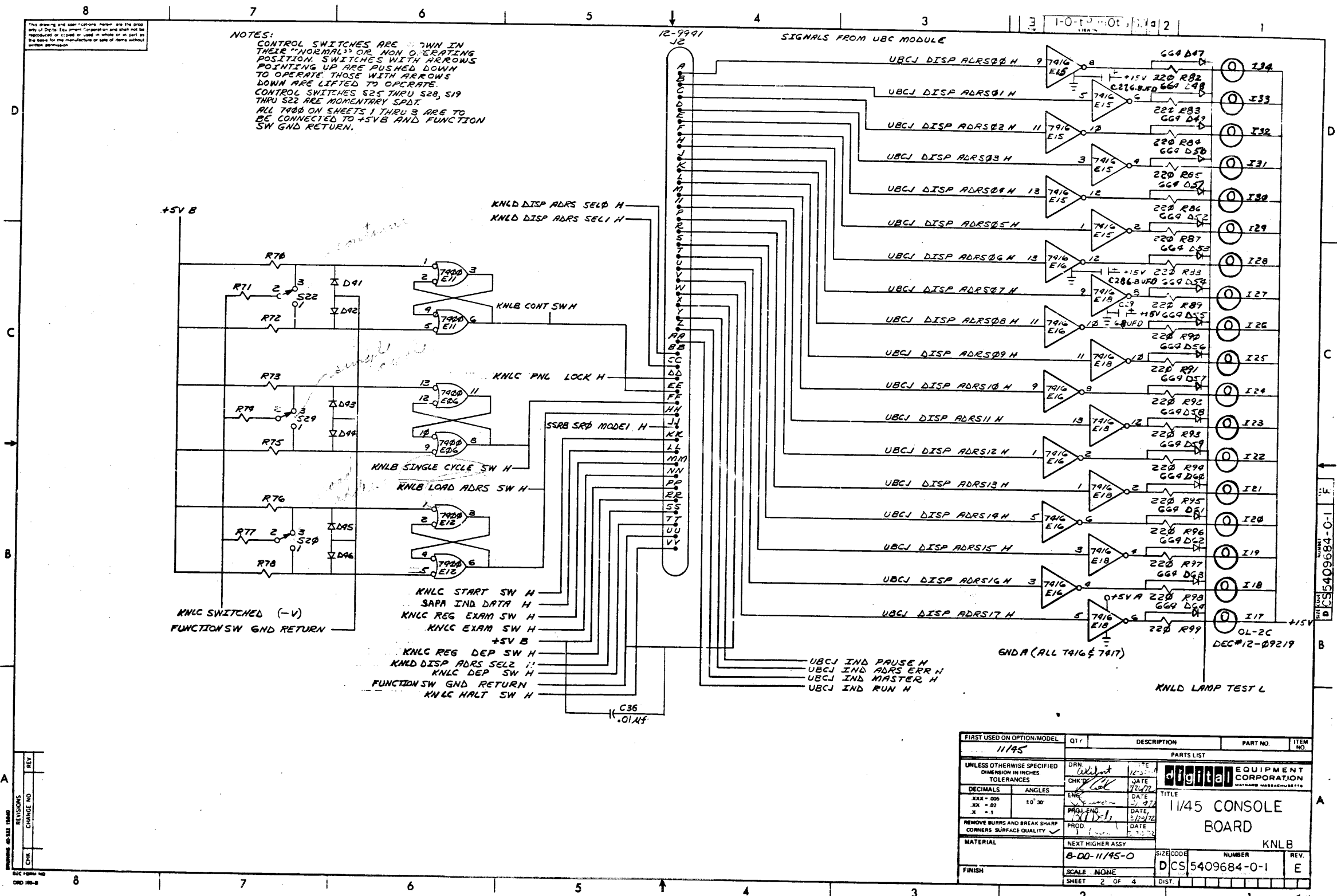
"SWITCH REGISTER" SWITCHES SHOWN IN LOGICAL "0" STATE (DOWN)

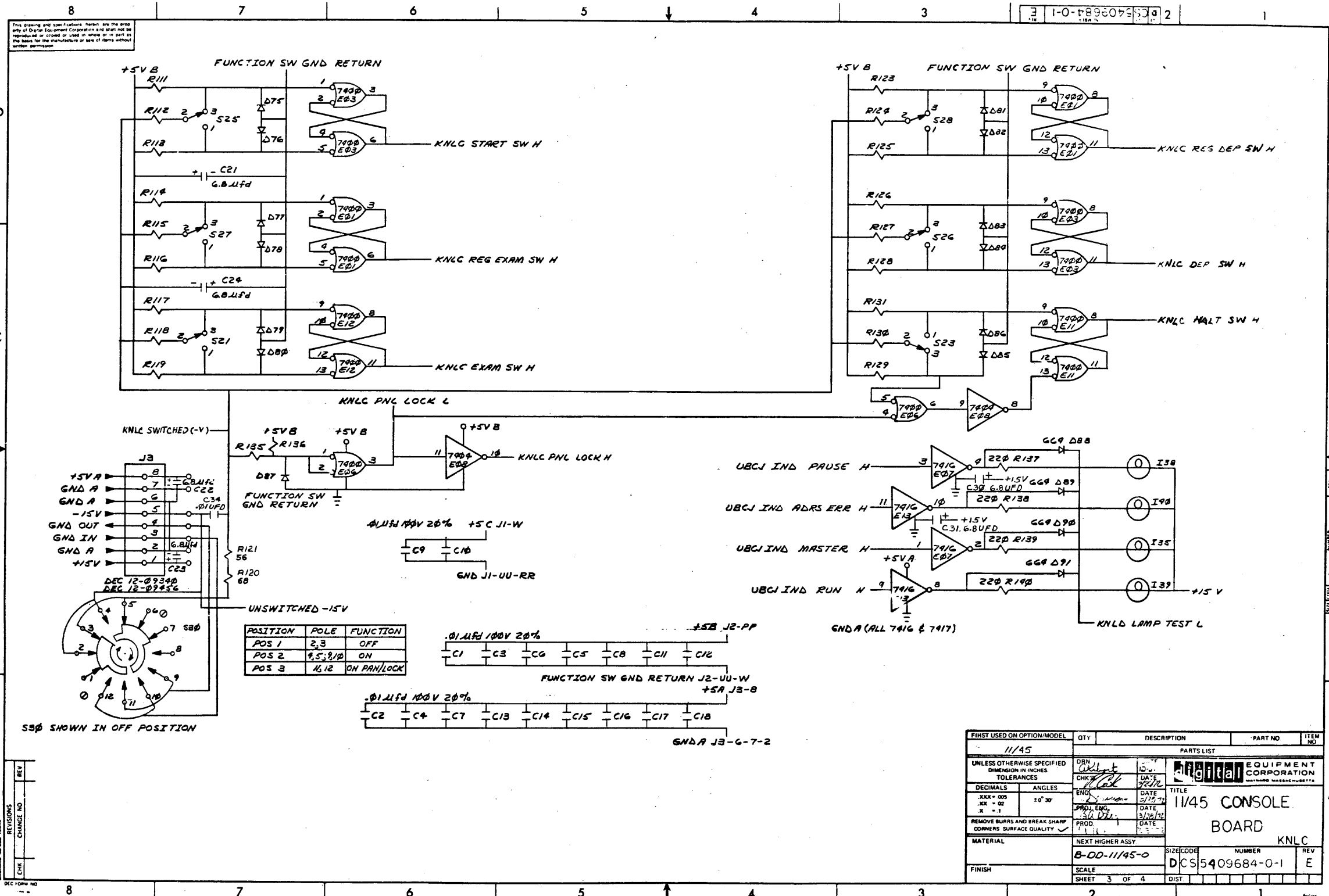
- NOTES:
- CONTROL LOGIC AND DISPLAY GROUNDS MUST BE KEPT SEPARATE
 - ALL RESISTORS ARE 22K UNLESS MARKED OTHERWISE
 - ALL UNMARKED DIODES ARE D664



| REV | CHG | NO | DATE | BY |
|-----|----------------|----|---------|------------|
| 1 | 15409684-00001 | B | 7-14-72 | J. SWANSON |
| 2 | 15409684-00002 | C | 7-14-72 | J. SWANSON |
| 3 | 15409684-00003 | D | 7-14-72 | J. SWANSON |
| 4 | 15409684-00004 | E | 7-14-72 | J. SWANSON |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--------|-------------|-----------------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | FINISH | DATE | |
| .XX - .006 | ±0°30' | PROD. | 7/14/72 | |
| .XX - .02 | | PROJ. ENG. | 7/14/72 | |
| X - .1 | | PROD. | 7/14/72 | |
| REMOVE BURS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| NEXT HIGHER ASSY. | | | | |
| B-DD-11/45-0 | | | | |
| FINISH | | | | |
| SCALE | | | | |
| SHEET 1 OF 4 | | | | |
| TITLE | | | NUMBER | REV |
| 11/45 CONSOLE BOARD | | | DCS 5409684-0-1 | E |
| | | | KNLA | |





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REVISIONS

| REV | DATE | DESCRIPTION |
|-----|-------------|------------------|
| 1 | DEC 10 1970 | INITIAL DESIGN |
| 2 | DEC 12 1970 | CHANGED TO 11/45 |

| POSITION | POLE | FUNCTION |
|----------|----------|-------------|
| POS 1 | 2,3 | OFF |
| POS 2 | 4,5,8,10 | ON |
| POS 3 | 1,12 | ON PAN/LOCK |

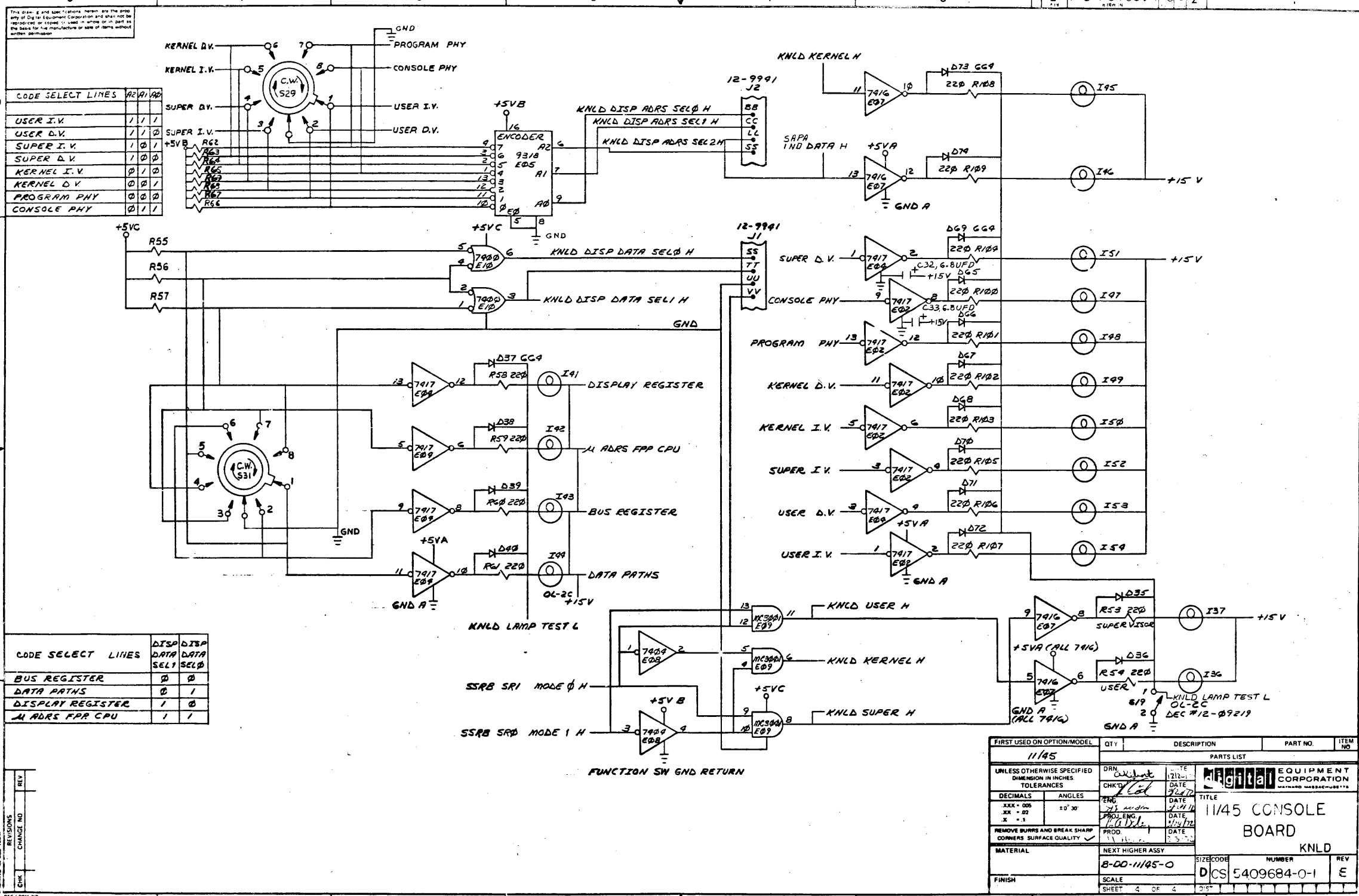
| FIRST USED ON OPTION/MODEL | QTY | DESCRIPTION | PART NO | ITEM NO |
|---|--------|---------------------|-----------|-------------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX = .003 | ± 30' | TITLE | | |
| .XX = .02 | | 11/45 CONSOLE BOARD | | |
| .X = .1 | | KNLC | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | NEXT HIGHER ASSY | SIZE CODE | NUMBER |
| | | B-DD-11/45-0 | DCS | 5409684-0-1 |
| FINISH | | SCALE | SHEET | REV |
| | | 3 OF 4 | DIST | E |

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| CODE SELECT LINES | AR | AI | AD |
|-------------------|----|----|----|
| USER I.V. | 1 | 1 | 1 |
| USER D.V. | 1 | 1 | 0 |
| SUPER I.V. | 1 | 0 | 1 |
| SUPER D.V. | 1 | 0 | 0 |
| KERNEL I.V. | 0 | 1 | 0 |
| KERNEL D.V. | 0 | 0 | 1 |
| PROGRAM PHY | 0 | 0 | 0 |
| CONSOLE PHY | 0 | 1 | 1 |

| CODE SELECT LINES | DISP DATA SELY | DISP DATA SEL0 |
|-------------------|----------------|----------------|
| BUS REGISTER | 0 | 0 |
| DATA PATHS | 0 | 1 |
| DISPLAY REGISTER | 1 | 0 |
| AI ADRES FPP CPU | 1 | 1 |

| REV | CHANGE NO |
|-----|-----------|
| | |



| FIRST USED ON OPTION/MODEL | QTY | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|-----|-------------|----------|----------|
| 1145 | | | | |

| UNLESS OTHERWISE SPECIFIED | | DIMENSION IN INCHES | |
|----------------------------|----------|---------------------|--|
| DECIMALS | ANGLES | TOLERANCES | |
| XXX - 000 | ± 0° 30' | | |
| XX - 00 | | | |
| X - 0 | | | |

| DRN | DATE | CHKD | DATE | ENGR | DATE | PROJ. ENGR | DATE | PROD | DATE |
|-----|------|------|------|------|------|------------|------|------|------|
| | | | | | | | | | |

| PARTS LIST | | TITLE | |
|-------------------------------|--|--------------------|--|
| DIGITAL EQUIPMENT CORPORATION | | 1145 CONSOLE BOARD | |
| MATERIAL | | NEXT HIGHER ASSY | |
| FINISH | | SCALE | |

| SIZE | CODE | NUMBER | REV |
|------|--------|--------|-----|
| B-00 | 1145-0 | | E |

| SHEET | OF | TITLE |
|-------|----|-----------------|
| 4 | 4 | DCS 5409684-0-1 |

DCS 5409684-0-1

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

| SEQUENCE | SEQUENCE |
|--------------------------------|------------------------------|
| DRAWING DIRECTORY | B-DD-KB11-0 (SHEET ONE ONLY) |
| MODULE UTILIZATION | E-MU-KB11-A-1 |
| BLOCK DIAGRAM | D-BD-KB11-A-02 |
| KB11-A FLOW DIAGRAMS | D-FD-KB11-A-03 |
| DATA PATHS (DAP) | E-CS-M8100-0-1 |
| GENERAL REGS & ALU CNTL (GRA) | E-CS-M8101-0-1 |
| IR DECODE & COND CODES (IRC) | E-CS-M8102-0-1 |
| PROC DATA & UNIBUS REG (PDR) | E-CS-M8104-0-1 |
| ROM & ROM CONTROL (RAC) | E-CS-M8103-0-1 |
| SYSTEM JUMPER BOARD (SJB) | E-CS-M8116-0-1 |
| TIMING GENERATOR (TIG) | E-CS-M8109-0-1 |
| TRAP & MISC CNTL (TMC) | E-CS-M8105-0-1 |
| UNIBUS & CONSOLE CNTL (UBC) | E-CS-M8106-0-1 |
| BUS CABLES & GRANT CHAIN | D-IC-KB11-A-BG |
| CIRCUIT SCHEMATIC | C-CS-M930-0-1 |
| CIRCUIT SCHEMATIC | C-CS-M920-0-1 |
| CIRCUIT SCHEMATIC | E-CS-5409910-0-1 |
| CIRCUIT SCHEMATIC | E-CS-5409912-0-1 |
| CIRCUIT SCHEMATIC (TIG) | E-CS-M8109-0-1 |
| SPECIAL REVISION | |

THIS IS PRINT SET

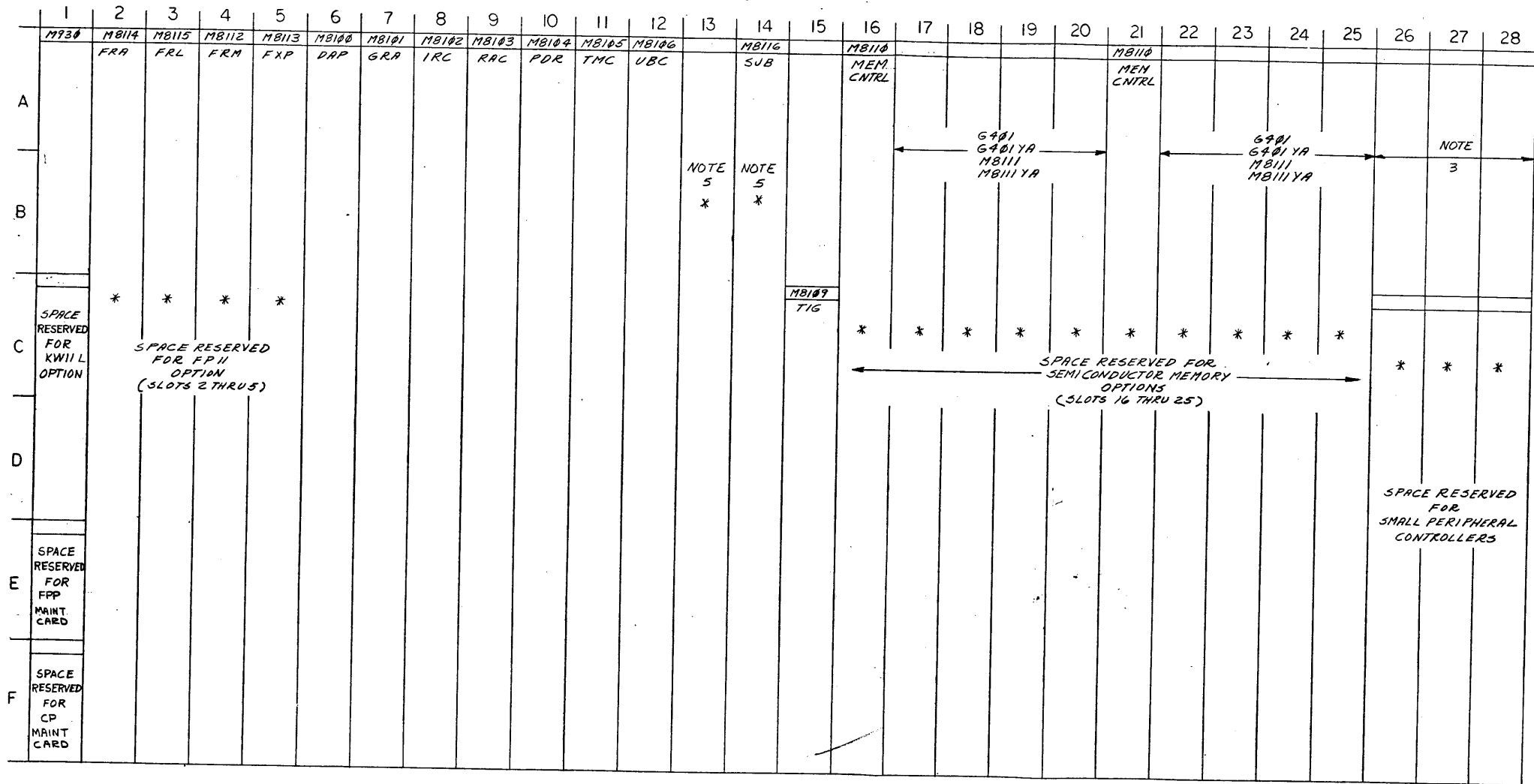
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| UNIT VARIATIONS | | PRINT SET TYPE | | | | |
|-----------------|------------------|----------------|--|--|--|--|
| VARIATION | TITLE | KB11-1 | | | | |
| KB11-A | 16 BIT PROCESSOR | X | | | | |
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| REVISIONS | | DATE | CHG. NO. | REV | USED ON OPTION/MODEL | DRN. | DATE | TITLE | SIZE CODE | | NUMBER | REV |
|-----------|-------|---------------|----------|-----|----------------------|-----------------------------|---------|------------------|-----------|----|--------|-----|
| | 5/72 | 7008871-00002 | A | | 11/45 | R. COOK | 3/30/72 | 16 BIT PROCESSOR | B | DD | KB11-0 | 20 |
| | 7/72 | 7008871-00003 | B | | | R. COOK | 3/30/72 | | | | | |
| | 8/72 | KB11A-6 | C | | | PROJ ENG. <i>B.L. Dilly</i> | 4/29/72 | | | | | |
| | 12/73 | KB11A-7 | D | | | PROJ. <i>D. D...</i> | 5-1-72 | | | | | |
| | 3-74 | KB11A-9 | E | | | FIELD SERV. <i>Aut...</i> | 5/1/72 | | | | | |
| | 6-74 | KB11A-10 | F | | | | | | | | | |
| | | KB11A-11 | H | | | | | | | | | |
| | | KB11A-12A | J | | | | | | | | | |
| | | KB11A-13 | K | | | | | | | | | |
| | | KB11A-14 | L | | | | | | | | | |
| | | KB11A-15 | M | | | | | | | | | |
| | | KB11A-16 | N | | | | | | | | | |
| | | KB11A-17 | P | | | | | | | | | |
| | | KB11A-18 | R | | | | | | | | | |
| | | KB11A-19 | S | | | | | | | | | |
| | | KB11A-20 | T | | | | | | | | | |
| | | KB11A-21 | U | | | | | | | | | |
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WIRED SIDE



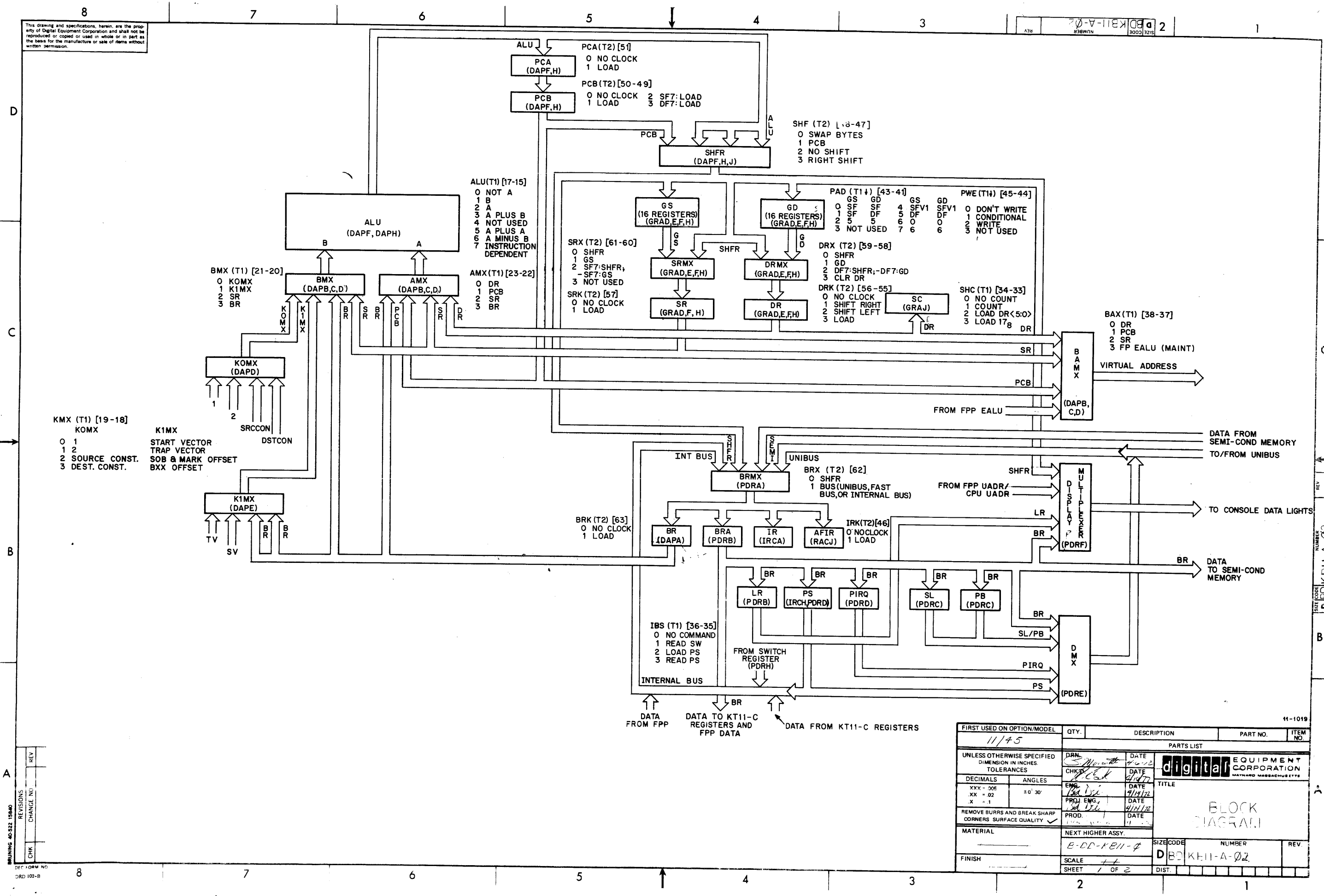
* DESIGNATES OPTION

- NOTES:
- POWER TO MOS AND BIPOLAR MEMORY REMAINS ON WITH THE CONSOLE ON/OFF SWITCH IN THE OFF POSITION. THIS IS INDICATED BY THE LED ON THE MOS CONTROL BOARD. ~~IF THERE IS NO MEMORY MANAGEMENT (MB107 AND MB108) INSTALLED, THE SYSTEM JUMPER BOARD (M930) MUST BE INSTALLED IN SLOT #14.~~
 - CAUTION MUST BE OBSERVED WHEN INSTALLING THE BOARDS INTO THE BACKPANEL SLOTS BECAUSE OF NON-STANDARD VOLTAGES PRESENT IN SLOTS 01, 02 AND 15 THRU 20.
 - IF ONLY ONE UNIBUS IS USED:
 - THE UNIBUS PLUGS IN SLOT #26.
 - PLUG AN INTERNAL BUS CONNECTOR JUMPER (M920) INTO SLOTS #26 AND #27.
 - PLUG A BUS TERMINATOR (M930) INTO SLOT #1.
 - IF TWO UNIBUSES ARE USED:
 - UNIBUS A PLUGS IN SLOT #26.
 - TERMINATOR (M930) FOR UNIBUS A PLUGS INTO SLOT #1.
 - UNIBUS B PLUGS IN SLOT #27.
 - TERMINATOR (M930) FOR UNIBUS B PLUGS INTO SLOT #28.
 - MODULES IN SLOTS 17-20 MUST BE SAME TYPE; MODULES IN SLOTS 22-25 MUST BE SAME TYPE.
 - IF KTI1 OPTION IS PRESENT MB108 GOES IN SLOT 13 & MB107 GOES IN SLOT 14, IF NO KTI1 MB116 GOES IN SLOT 14 & SLOT 13 IS EMPTY.

| | | |
|---|-------------------------|-------------|
| * | SYSTEM MAINT TOOLS | B-DD-SP45-A |
| * | FLOATING POINT PROC. | B-DD-FPII-B |
| * | 64 WORD BOOTSTRAP | B-DD-MRII-D |
| * | INTERVAL CLOCK | A-ML-KWI-D |
| * | BIPOLAR MEMORY | B-DD-MS1K |
| * | MOS MEMORY | B-DD-MS1B |
| * | MEM. MANAGEMENT UNIT | B-DD-KTI1-C |
| 1 | INT. BUS CONN ASSY | M9200 |
| 2 | BUS TERMINATOR | M930 |
| 1 | SYSTEM JUMPER BD | MB116 |
| 1 | TIMING GENERATOR | MB109 |
| 1 | UNIBUS & CONSOLE CNTL | MB106 |
| 1 | TRAP & MISC. CONTROL | MB105 |
| 1 | PROC. DATA & UNIBUS REG | MB104 |
| 1 | ROM & ROM CONTROL | MB103 |
| 1 | IR DECOD & COND. CODES | MB102 |
| 1 | GENERAL REGS & LUCNTL | MB101 |
| 1 | DATA PATHS | MB100 |

| FIRST USED ON OPTION/MODEL | | QTY. | | DESCRIPTION | | PART NO. | | ITEM NO. | |
|--|--|-------------------|--|-------------|--|-----------------------|--|----------|--|
| 11/45 | | | | | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES | | | | | | | | | |
| DECIMALS | | ANGLES | | DATE | | PARTS LIST | | | |
| XXX - .001 | | 1/2° - 30' | | DATE | | TITLE | | | |
| X - .1 | | 10° - 30' | | DATE | | MODULE UTILIZATION | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | DATE | | EQUIPMENT CORPORATION | | | |
| FINISH | | SCALE | | DATE | | REV. A | | | |
| SHEET | | OF | | DATE | | EQUIPMENT CORPORATION | | | |

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BRUNING 40-522 15840

| REV | CHANGE NO | REV |
|-----|-----------|-----|
| | | |
| CHK | | |

DEF FORM NO. DRD 102-B

11-1019

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|-------------|----------|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | | | |
| XXX - .005 | ± 0° 30' | | | |
| XX - .02 | | | | |
| X - .1 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| NEXT HIGHER ASSY. | | | | |
| FINISH | | | | |
| SCALE | | | | |
| SHEET 1 OF 2 | | | | |

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: BLOCK DIAGRAM

SIZE CODE: D BDK11-A-02
NUMBER:
REV:

DIST:

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REV. NO. 2
 BOKB11-A-02

- CCL (T2) [54-52]
- 0 NO CHANGE
 - 1 INSTRUCTION DEPENDENT SET/CLR FROM IR (CCOP)
 - 2 LOAD FROM FPP IF ENABLED
 - 3 CCLD4
 - 4 CCLD5
 - 5 CCLD6
 - 6 CCLD7
 - 7 CCLD7

FROM DATA PATHS
 TO CONDITION CODES
 CONDITION CODE GENERATOR (GRAB, IRCE, F)

FROM IR
 IR DECODE (IRCB, C, D)

FROM AFIR
 AFIR DECODE (RACE, F, H)

SUBSIDIARY ROM CONTROL (IRCH)

FORK C (IRCC)

FORK B (IRCB)

FORK A (RACE, F, H)

RAR (RACD)

RARB (RACA, RACC)

RARA (RACC, RACD)

CONDITION CODE SUBSIDIARY ROM (IRCH)

ALU SUBSIDIARY ROM (GRAA)

| BEF [11-8] | UADR5 [+40] | UADR4 [+20] |
|------------|------------------------------|-------------------|
| 0 | DESTINATION MODE 3,5,7 | SR#1 |
| 1 | CONDITION CODE Z | -(PWRP+INTR) |
| 2 | SC ≠ 0 | SC < 0 |
| 4 | -DIV SUB | CONDITION CODE N |
| 5 | -OBD (ODD BYTE DESTINATION)† | -DIV QUIT |
| 6 | BR14 (0) | PS RESTORE |
| 7 | | -[BRQ*-(T+CONF)] |
| 10 | RIP+FP SYNC | -(FP REQ*FP SYNC) |
| 11 | SC ≠ 0 | DRO (1) |
| 12 | CONF (CONSOLE FLAG) | -BRQ |
| 13 | PF(O)*(SF+TF) | PF(O)*(SF+TF) |
| 14 | -FJ/CLASS | -O/CLASS |
| 15 | DRO (1) | SR15 (1) |
| 16 | RIP+FP SYNC | FP SYNC*FP REG WR |
| 17 | | |

BRANCH (RACK)

ADDRESS GATING (RACL)

- ROM
- ROM <63:60> (RACA)
 - ROM <59:56> (RACA)
 - ROM <55:52> (RACA)
 - ROM <51:48> (RACA)
 - ROM <47:44> (RACB)
 - ROM <43:40> (RACB)
 - ROM <39:36> (RACB)
 - ROM <35:32> (RACB)
 - ROM <31:28> (RACC)
 - ROM <27:24> (RACC)
 - ROM <23:20> (RACC)
 - ROM <19:16> (RACC)
 - ROM <15:12> (RACD)
 - ROM <11:08> (RACD)
 - ROM <07:04> (RACD)
 - ROM <03:00> (RACD)

RBR (RACA, RACB, RACC)

GENERAL REGISTER CONTROL (GRAC)

ALU CTRL (GRAA)

- FEN [14-12]
- FEN 14 ENABLE FORK C
 - FEN 13 ENABLE FORK B
 - FEN 12 ENABLE FORK A

ADR [07-00]
 TO ADDRESS GATING

- MSC (T1) [29-27]
- 0 NO AFFECT
 - 1 ENA FP ATTN
 - 2 NOT USED
 - 3 SET CONF IF KERNEL MODE
 - 4 SPL (SET PRIORITY LEVEL)
 - 5 CONDITIONAL BUST
 - 6 BRQ STROBE
 - 7 BUST (BUS START)

- BSD (T1) [40-39]
- 0 NO PAUSE
 - 1 INTR PAUSE
 - 2 BUS PAUSE
 - 3 BUS LONG PAUSE

- BSC (T1) [26-24]
- 0 DATI
 - 1 SRC1 DATI
 - 2 KERNEL DATI
 - 3 SRC2 DATI
 - 4 FC (CONTROLLED BY FPP)
 - 5 DATO
 - 6 BSOP1
 - 7 BSOP2

- BCT (T1) [32-30]
- 0 NO AFFECT
 - 1 READ FPP DATA
 - 2 CONSOLE ACKNOWLEDGE
 - 3 CLEAR FLAGS
 - 4 INIT IF KERNEL MODE
 - 5 STACK REFERENCE
 - 6 ACKNOWLEDGE
 - 7 BEND (BUS END)

† (BEF=5)*OBD=CONDITIONAL FORK B
 (BEF=14)=CONSOLE BRANCHES
 (BEF=14)=CONDITIONAL FORK C
 (BEF=15)*-FJ/CLASS=CONDITIONAL FORK B

FROM CONSOLE
 UNIBUS AND CONSOLE CONTROL (UBC)

TRAPS AND MISCELLANEOUS CONTROL (PRIORITY ARBITRATOR) (TMC)

TIMING GENERATOR (TIG)

TO/FROM UNIBUS CONTROL SIGNALS

TO/FROM FPP, KT11-C FASTBUS & UNIBUS (BR, BG)

FROM KT11-C FASTBUS & UNIBUS

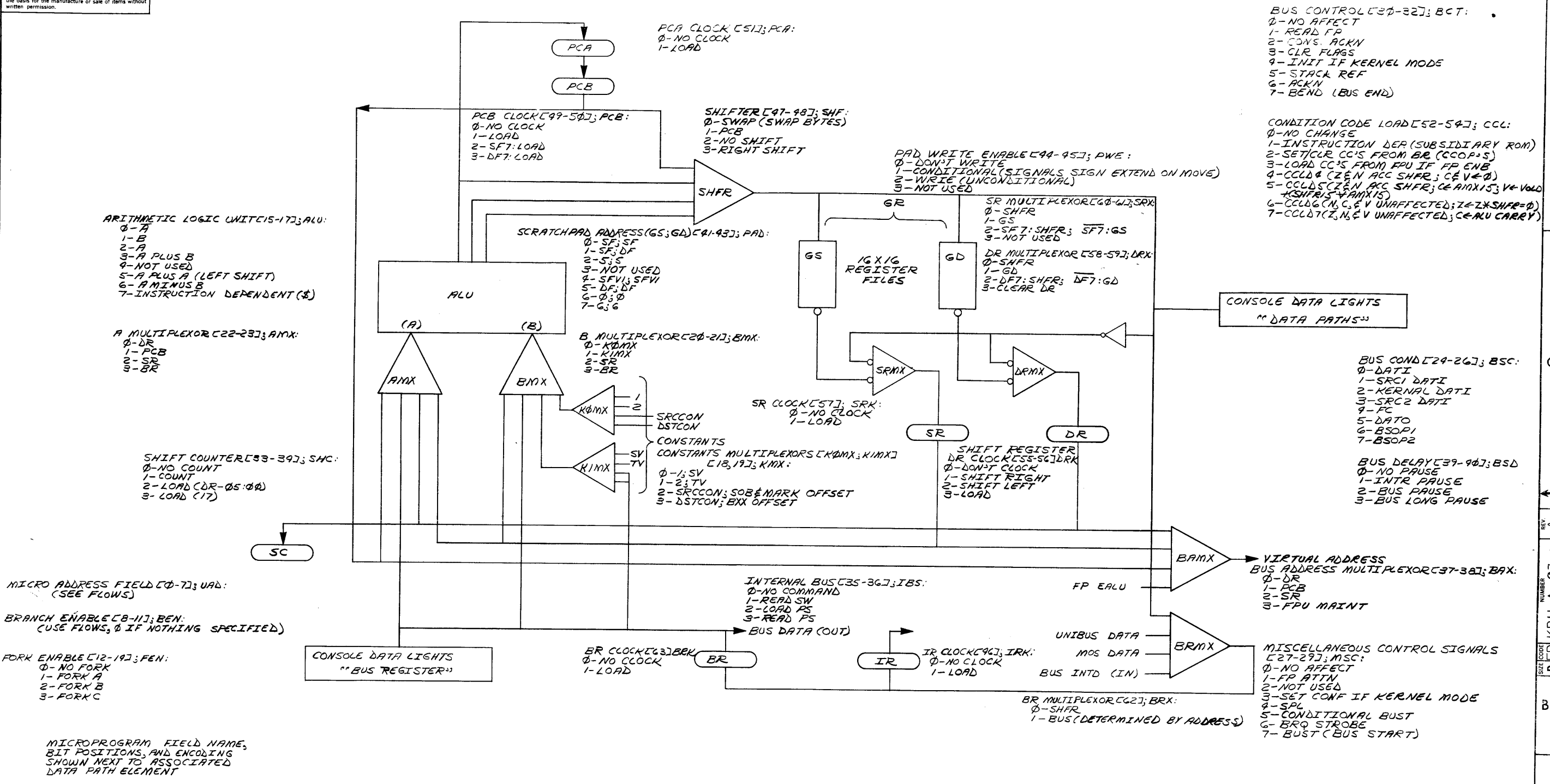
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|-----------|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX = .005 | ±0° 30' | DRN | DATE | |
| .XX = .02 | | CHK | DATE | |
| .X = .1 | | ENG | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROG. ENG. | DATE | |
| MATERIAL | | PROD. | DATE | |
| FINISH | | NEXT HIGHER ASSY. | | |
| | | B-DD-KB11-02 | SIZE CODE | NUMBER |
| | | SCALE | DIST. | REV. |
| | | SHEET 2 OF 2 | | |

BLOCK DIAGRAM

BRUNING 40522 15840
 DEC FORM NO DRD 102-B

REV. NO. 2
 BOKB11-A-02

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| DATA PATHS | | | |
|--|----------|-------------|--------------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | ITEM NO. |
| 11/45 | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | |
| DECIMALS | ANGLES | | |
| XXX - .005 | ± 0° 30' | | |
| XX - .02 | | | |
| X - .1 | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | |
| MATERIAL | | | |
| NEXT HIGHER ASSY. | | | |
| FINISH | | SCALE | SHEET 1 OF 1 |
| PARTS LIST | | SIZE CODE | NUMBER |
| R-DD-KBII-0 | | D-FD | KBII-A-03 |
| REV | | A | |

| REV | CHG | NO | BY | DATE |
|-----|-----|----|----|------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

REV. 102-B

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- FET 00
- FET.00 (217)
 - FET.01 (331)
 - FET.02 (332)
 - FET.03 (334)
 - FET.04 (164)
 - FET.05 (126)
 - FET.06 (373)
 - FET.07 (237)
 - FET.08 (356)
 - FET.09 (265)

START FETCH NEXT INSTR.
CLEAR INSTR. REG

t₁ BA←PCB; BC←DATI
t₂ SHFR←SR-SR
t₃ BUST; CLEAR FLAGS
t₄ IR←SHFR

- BEN12 (240)
BRQ
- BRQ
- FET.10 (266)
FET.11 (321)
FET.12 (322)
FET.13 (324)

GET INSTR. STEP PC
BEYOND

t₁ BA←PCB; BC←DATI
t₂ SHFR←PCB+2
t₃ BRQ STROBE
t₄ BUS LONG PAUSE
t₅ PCA←PCB+2
t₆ IR←BUS; BR←BUS
PCB←PCA

IRD.00 (343)

IRD.00 (343)

DECODE THIS INSTR. STEP
PCB BEYOND. READ SRC. DST
FIELD. GEN REGS

t₁ BA←PCB; BC←DATI
t₂ SHFR←PCB
t₃ CONDITIONAL BUST

t₄ PCA←PCB+2
t₅ -SFT: SR←GSEFJ
t₆ -SFT: SR←SHFR
-DFT: DR←GDEDFJ
-DFT: DR←SHFR

SEE PG. 6-34 OF CPU MAINT MAN

BIN X SM123 (021) SM1 (022) SM23

S13.00
S13.01

FETCH SRC & STEP
REGISTER UP

t₁ BA←SR; BC←SRC1 DATI
t₂ SHFR←SR+SRCCON
t₃ BUST
t₄ PCA←SR+SRCCON
t₅ GRCSFJ←SHFR
t₆ SFT: PCB←PCA

(027)

S13.10 (027)

GET SRC. REREAD DST. REG

t₁ BA←SR; BC←SRC1 DATI
t₂ SHFR←PCB
t₃ BRQ STROBE
t₄ BUS LONG PAUSE
t₅ BR←BUS
t₆ -DFT: DR←GDEDFJ
-DFT: DR←SHFR

FEN4 BEN14 (317)

-SM357 SM357

BIN X SM45 (024)

S45.00 (024)

STEP REGISTER DOWN

t₁ <BA←PCB>
t₂ SHFR←SR-SRCCON
t₃ BEND
t₄ PCA←SR-SRCCON
t₅ GRCSFJ←SHFR
t₆ SFT: PCB←PCA

(023)

S45.10 (023)

FETCH SRC

t₁ BA←SR; BC←SRC1 DATI
t₂ SHFR←PCB
t₃ BUST; GRCSFJ

(027)

MTP (045)

MTR.00 (045)

REG. IN SR (SFG IN OR
CODE); POP TOP OF STACK

t₁ <BA←PCB>
t₂ SHFR←SR+2
t₃ BEND
t₄ GRGJ←SHFR

(151)

MTR.10 (151)

CORRECT DR. IN CASE DEST.
FIELD G; GET TOP OF STACK

t₁ BA←SR; BC←SRC2 DATI
t₂ SHFR←PCB
t₃ BUST
t₄ -DFT: DR←GDEDFJ
-DFT: DR←SHFR

(146)

S13.40 (2)

BXX * BCOK

BXX.00 (320) -BRQ (BNE, BGE, BGT, * - BRQ)
BPL, BHI, BVC, BCC

BXX.01 (325) -BRQ (BMI, BLOS, BVS, BCS)

BXX.02 (326) -BRQ (BR, BEO, BLT, BLE)

BXX.03 (330) BRQ (BNE, BGE, BGT, BPL, BHI, BVC, BCC)

BXX.04 (335) BRQ (BMI, BLOS, BVS, BCS)

BXX.05 (336) BRQ (BE, BEO, BLT, BLE)

SUCCESSFUL BRANCH,
FIX PC

t₁ <BA←PCB>
t₂ <SHFR←PCB+BXX DISP>
t₃ BEND; BRQ STROBE
t₄ PCA←PCB+BXX DISP
t₅ PCB←PCA

(217)

FET.00 (1)

BXX * -BCOK * -BRQ

FET.11 (321) BPL, BHI, BVC, BCC

FET.12 (322) BNE, BGE, BGT

FET.13 (324) BEQ, BLT, BLE, BMI, BLOS, BVS, BCS

BXX * -BCOK * -BRQ

FET.01 (331) BPL, BHI, BVC, BCC

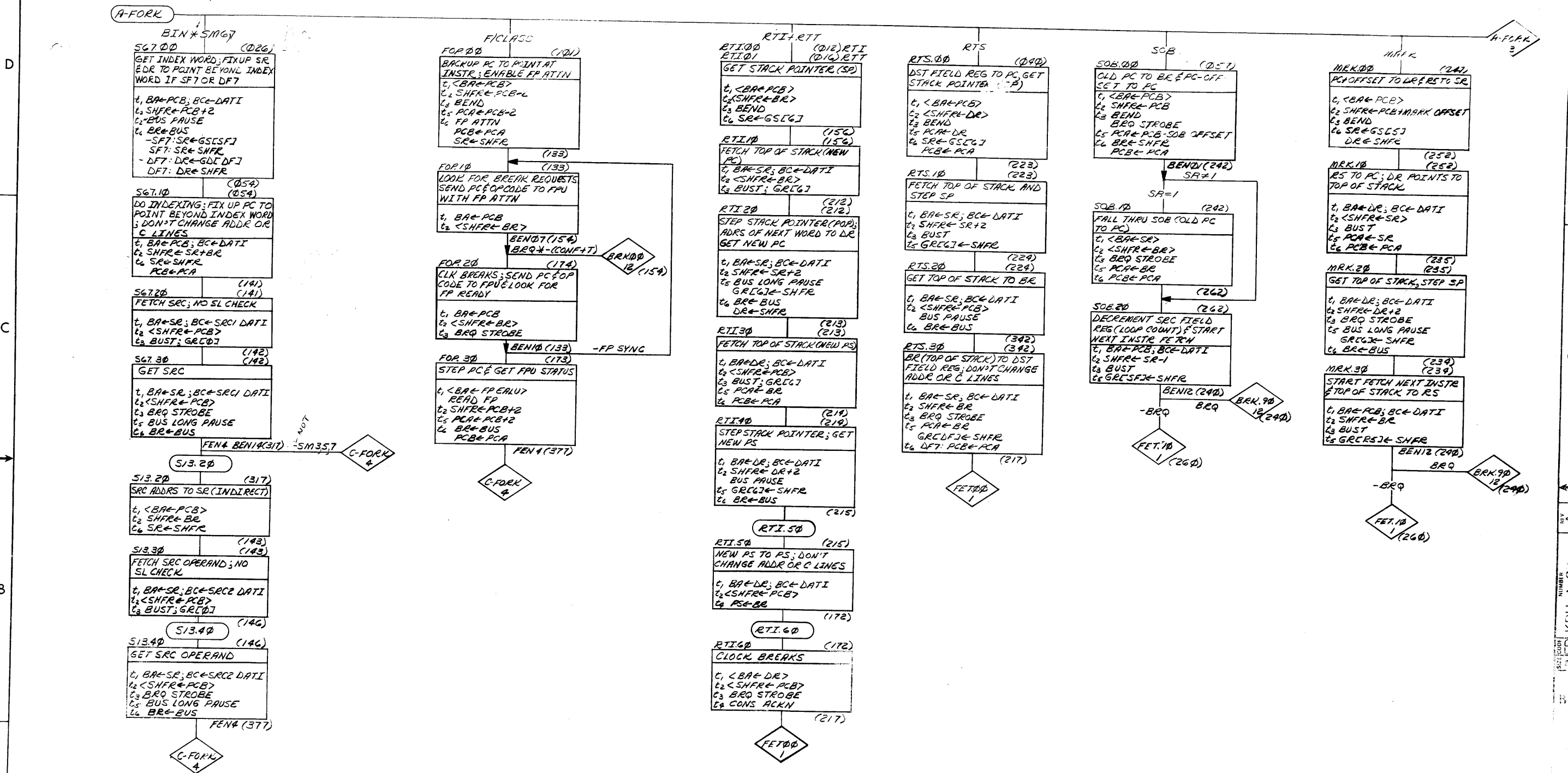
FET.02 (332) BNE, BGE, BGT

FET.03 (334) BEQ, BLT, BLE, BMI, BLOS, BVS, BCS

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|------------------------|--|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX = .005 | ±0° 30' | DRN. DATE 1-5-71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| .XX = .02 | | CHK'D. DATE | TITLE KBII-A FLOW DIAGRAMS (FLOWS 1) | |
| .X = .1 | | ENG. DATE 1-7-71 | REV 4 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. ENG. DATE 1-7-71 | SIZE CODE NUMBER | |
| | | PROD. DATE 1-13-71 | D FD KBII-A-03 | |
| MATERIAL | NEXT HIGHER ASSY. | | REV | |
| | | | 4 | |
| FINISH | SCALE | | SHEET 2 OF 15 | |
| | | | DIST. | |

| REV | CHANGE NO. |
|-----|------------|
| | |

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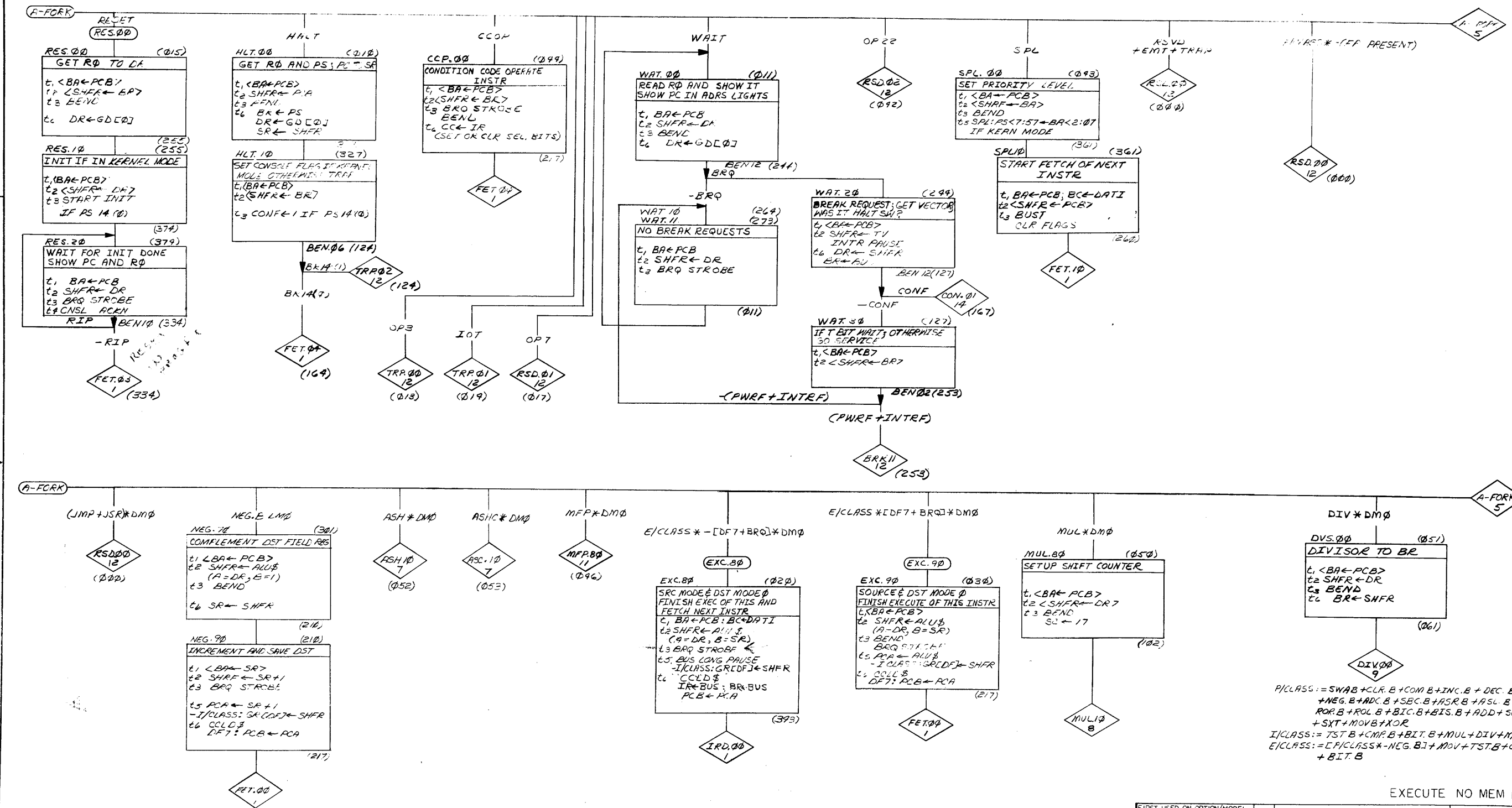
CONTROL; FLOATING; INDEXED SOURCE

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------|--------------------------|-----------------|--|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN <i>Advent</i> | DATE 3-12-74 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS |
| DECIMALS | ANGLES | CHK'D. | DATE | |
| XXX = .005 | X = 30' | ENG <i>...</i> | DATE 4-7-74 | TITLE KBII-A FLOW DIAGRAMS (FLOW ?) |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. ENG. <i>...</i> | DATE 4-3-74 | |
| | | PROD. <i>...</i> | DATE 4-15-74 | |
| | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | B-DU-KBII-0 | SIZE CODE D | NUMBER KBII-A-03 |
| | | SCALE | SHEET 3 OF 15 | REV. A |

BRUNING 40-522 15840
 REVISION
 CHANGE NO.
 CHA

NUMBER
 21FD KBII-A 0

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| REV | CHANGE NO |
|-----|-----------|
| | |
| | |
| | |

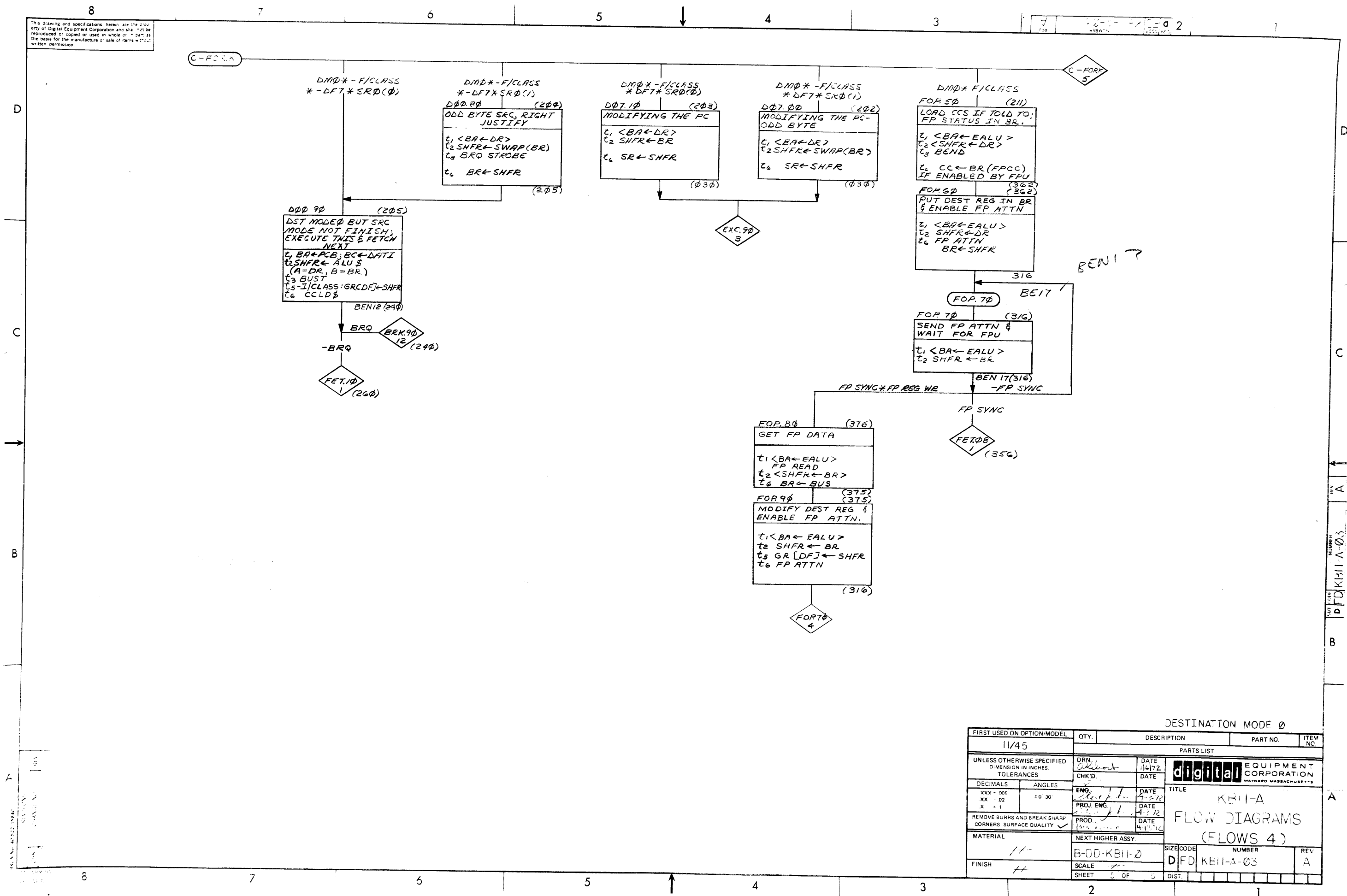
| | | | | |
|--|------|-------------|----------|----------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DRN. DATE 4-2-71 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | | | | |
| TOLERANCES | | | | |
| DECIMALS FRACTIONS ANGLES | | | | |
| ± .005 ± .005 ± 0°30' | | | | |
| FINAL SURFACE QUALITY / REMOVE BURRS AND BREAK SHARP CORNERS | | | | |
| MATERIAL | | | | |
| NEXT HIGHER ASSEMBLY | | | | |
| B-DD-K11-Ø | | | | |
| FINISH | | | | |
| SCALE | | | | |
| SHEET 4 OF 15 | | | | |
| DIST. | | | | |

EXECUTE NO MEM REF

digital EQUIPMENT CORPORATION
 TITLE: K11-A
 FLOW DIAGRAMS
 (FLOWS 3)

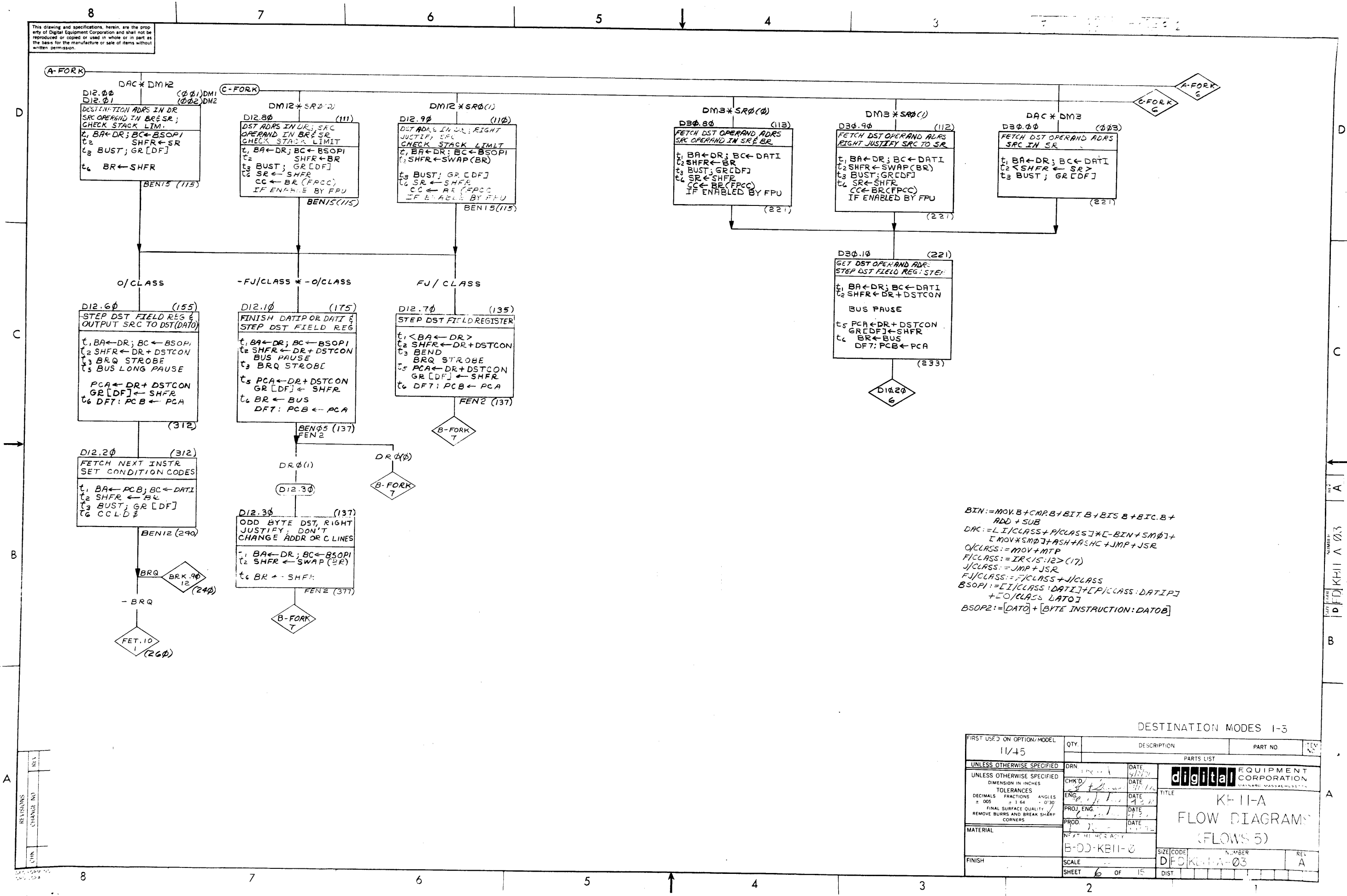
SIZE CODE NUMBER REV
 DFD K11-A-03 A

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| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|-------------------|-------------|-------------------------------|-----------|
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | | |
| DECIMALS | ANGLES | DRN | DATE | PARTS LIST | |
| XXX = .005 | XX = .02 | CHK'D. | DATE | digital EQUIPMENT CORPORATION | |
| X = .1 | ± 0° 30' | ENG. | DATE | MAYNARD MASSACHUSETTS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. ENG. | DATE | TITLE | |
| | | PROD. | DATE | KB11-A | |
| MATERIAL | | NEXT HIGHER ASSY. | | FLOW DIAGRAMS | |
| FINISH | | SCALE | | (FLOWS 4) | |
| | | SHEET | | SIZE CODE | NUMBER |
| | | 5 OF 13 | | D/DF | KB11-A-03 |
| | | | | DIST. | REV |
| | | | | | A |

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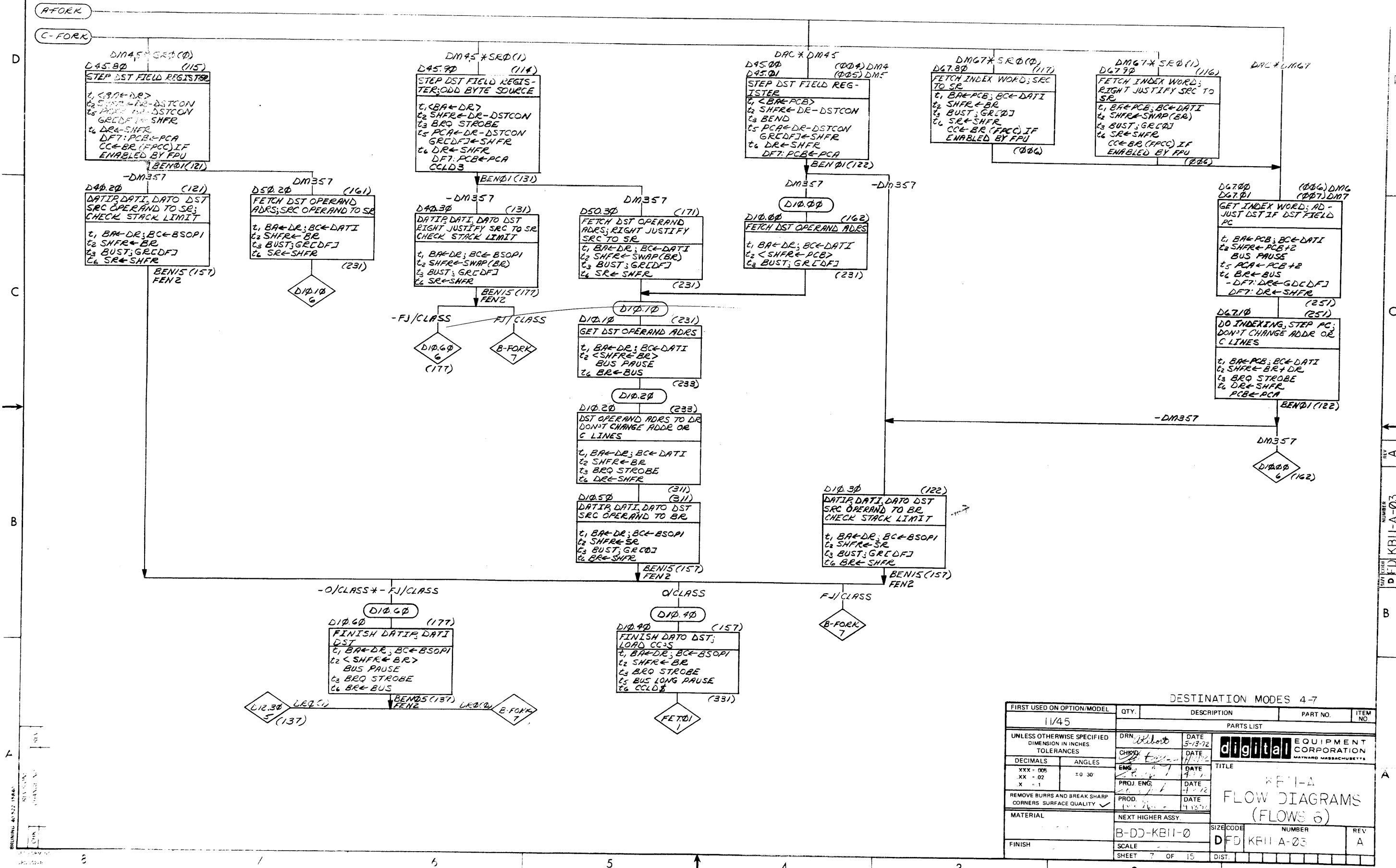
BIN := MOV.B + CMP.B + BIT.B + BIS.B + BIC.B + ADD + SUB
 DAC := L.I/CLASS + P/CLASS + C-BIN + SMO + I MOV * SMO + ASH + ASHC + JMP + JSR
 O/CLASS := MOV + MTP
 F/CLASS := IR < 15:12 > (17)
 J/CLASS := JMP + JSR
 FJ/CLASS := F/CLASS + J/CLASS
 BSOP1 := [I/CLASS: DATI] + [P/CLASS: DATIP] + [O/CLASS: DATO]
 BSOP2 := [DATO] + [BYTE INSTRUCTION: DATOB]

DESTINATION MODES 1-5

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|------|-------------------------------|----------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED | | | | |
| DRN | DATE | digital EQUIPMENT CORPORATION | | |
| CHK'D | DATE | TITLE | | |
| ENG. | DATE | KE-11-A | | |
| PROJ. ENG. | DATE | FLOW DIAGRAM | | |
| PROD. | DATE | (FLOWS 5) | | |
| MATERIAL | | | | |
| FINISH | | | | |
| SCALE | | SIZE CODE | NUMBER | REV. |
| SHEET 6 OF 15 | | DJDKH11-A-03 | | A |

| REV. | CHANGE NO. | DESCRIPTION |
|------|------------|-------------|
| | | |

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| DESTINATION MODES 4-7 | | | | |
|---|------------------|-------------------------------|-----------|----------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| XXX - 005 | ± 0.30 | digital EQUIPMENT CORPORATION | | |
| XX - 02 | | MAYNARD MASSACHUSETTS | | |
| X - 1 | | TITLE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | REF-1-A | | |
| MATERIAL | NEXT HIGHER ASSY | FLOW DIAGRAMS (FLOWS 6) | | |
| FINISH | SCALE | SIZE CODE | NUMBER | REV |
| | SHEET 7 OF 15 | D FD | KE11-A-03 | A |

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B-FORK

ASH (062)
 SHIFT COUNT TO 0;
 CAN'T CHANGE ADDR OR
 C LINES
 t1, BA←DR; BC←BSCPI
 t2 SHFR←BR
 t6 DR←SHFR

ASH.10 (052)
 LOAD STEP COUNTER
 WITH SHIFT COUNT
 t1, <BA←PCB>
 t2 <SHFR←SR>
 t3 BEND
 SC←DR

ASH.20 (305)
 (305)
 STEP SC; SET COND
 CODES; SEE IF NO SHIFT
 t1, <BA←DR>
 t2 SHFR←SR
 t3 BRQ STROBE
 SC←SC+1
 t6 CCLD4
 t7 EN ACC SHFR; C←V←0

ASC (063)
 SHIFT COUNT TO DR
 CAN'T CHANGE ADDR OR
 C LINES
 t1, BA←DR; BC←BSCPI
 t2 SHFR←BR
 t6 DR←SHFR

ASC.10 (053)
 LOAD STEP COUNTER
 READ LO-ORDER OPERAND
 TO DR
 t1, <BA←PCB>
 t2 <SHFR←SR>
 t3 BEND
 SC←DR
 t6 DR←GDC SFV1

ASC.20 (306)
 (306)
 STEP SC; SET COND
 CODES; SEE IF NO SHIFT
 t1, <BA←DR>
 t2 SHFR←SR
 t3 BRQ STROBE
 SC←SC+1
 t6 BR←SHFR
 CCLD4
 t7 EN ACC SHFR; C←V←0

FICLASS (036)
 DST ADRS TO BR
 ENABLE FP ATTN
 t1, <BA←DR>
 t2 SHFR←DR
 t3 BEND
 t6 BR←SHFR
 FP ATTN

FSV.20 12

ASH.40 (257)
 (166)
 SHIFT LEFT (ZERO IN-
 SERTION) CC'S KEPT
 CURRENT
 t1, <BA←PCB>
 t2 SHFR←SHL(SR)
 t3 BRQ STROBE
 SC←SC+1
 t5 GRESF1←SHFR
 t6 SR←SHFR
 CCLD5
 t7 EN ACC SHFR; C←AMX15
 V←VOLD+(SHFR15+AMX15)

ASH.30 (277)
 SHIFT RIGHT SIGN EX-
 TENDED; CC'S KEPT
 CURRENT
 t1, <BA←PCB>
 t2 SHFR←SHR(SR)
 t3 BRQ STROBE
 SC←SC+1
 t5 GRESF1←SHFR
 t6 SR←SHFR
 CCLD5

FET.00 1 (217)

ASC.40 (267)
 SHIFT RIGHT; SR←HI; DR
 =LO; SET COND CODES ON
 HI
 t1, <BA←DR>
 t2 SHFR←SHR(SR)
 t3 BRQ STROBE
 SC←SC+1
 t5 GRESF1←SHFR
 t6 SR←SHFR
 DR←RIGHT(DR)
 LALD INSERTEJ
 CCLD5
 t7 EN ACC SHFR; C←DRD0
 V←0

ASC.30 (247)
 (176)
 SHIFT LEFT; SR←HI; DR
 =LO; SET COND CODES ON
 HI
 t1, <BA←DR>
 t2 SHFR←ALU(A←SR, B=1)
 t3 SHL(SR)+DE15
 t4 BRQ STROBE
 SC←SC+1
 t5 GRESF1←SHFR
 t6 SR←SHFR
 DR←LEFT(DR)
 (0 INSERTED)
 CCLD5
 t7 EN ACC SHFR; C←AMX15;
 V←VOLD+(SHFR15+AMX15)

ASC.00 (207)
 NO SHIFT; SET COND
 CODES ON LO; START
 FETCH NEXT INSTR.
 t1, BA←PCB; BC←DATI
 t2 SHFR←DR
 t3 BUST
 t6 CCLD6
 t7 EN; C←V N/A; Z←ZOLD * SHFR
 SHFR=0

FET.05 1 (126)

FET.07 1 (237)

ASC.60 (227)
 (136)
 SHIFT DONE; SAVE LO
 ORDER SET COND CODES
 ON LO; START FETCH
 NEXT INSTR.
 t1, BA←PCB; BC←DATI
 t2 SHFR←DR
 t3 BUST
 t5 GRESF1←SHFR
 t6 CCLD6
 t7 EN; C←V N/A; Z←ZOLD * SHFR
 =0

FET.10 1 (260)

BRK.90 12 (240)

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|--|-----------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN | DATE | |
| DECIMALS | ANGLES | CHK'D | DATE | |
| XXX - .005 | XX - 30' | ENG | DATE | |
| X - .1 | | PROJ. ENG. | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. | DATE | |
| MATERIAL | NEXT HIGHER ASSY. | TITLE | | |
| FINISH | SCALE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | | |
| | SHEET 8 OF 15 | KBII-A FLOW DIAGRAMS (FLOWS 7) | | |
| | | SIZE CODE | NUMBER | REV. |
| | | D FD | KBII-A-03 | |

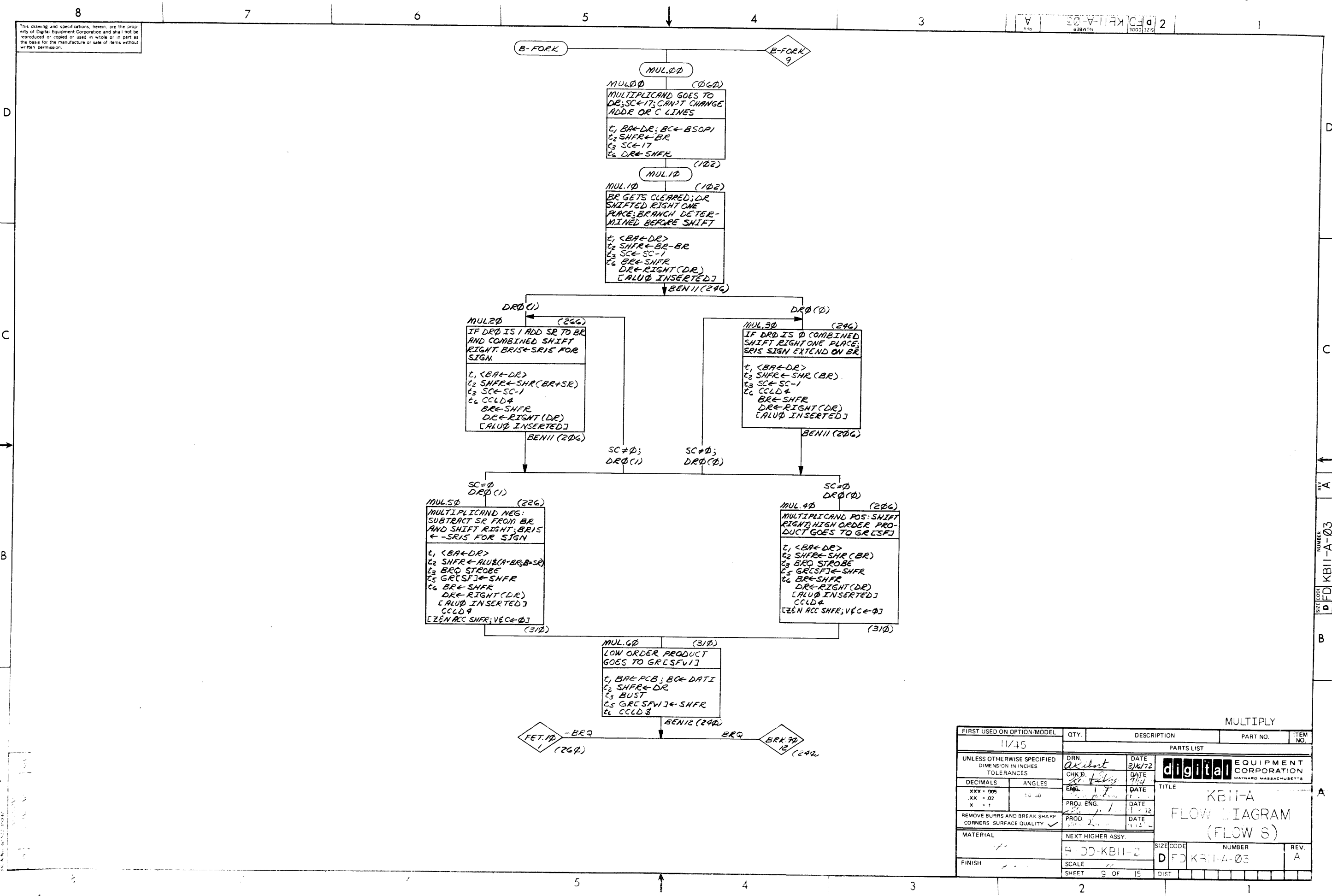
REVISIONS
 CHANGE NO. REV.

11/45

REV. A
 NUMBER
 D FD KBII-A-03

A

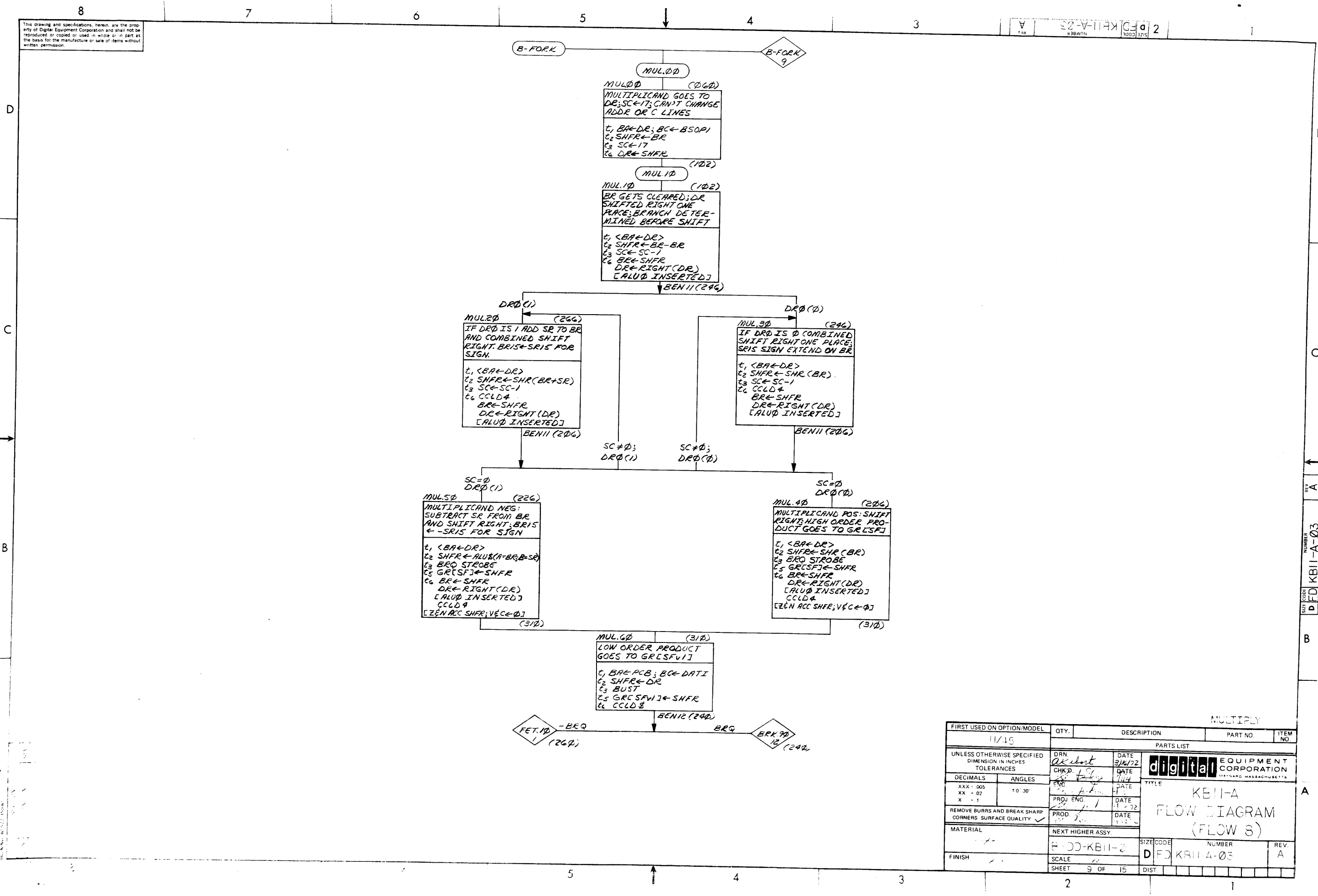
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| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--------|-------------------|--------------|--|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | CHK'D. | DATE | TITLE | |
| XXX + .005 | ± .00 | Eng. | 3/11/72 | KENHA FLOW DIAGRAM (FLOW 3) | |
| XX + .02 | | PROJ. ENG. | DATE | REV. | |
| X + .1 | | PROD. | DATE | A | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | | |
| FINISH | | SCALE | SIZE CODE | NUMBER | DIST |
| | | 9 OF 15 | FD KB11-A-03 | | |

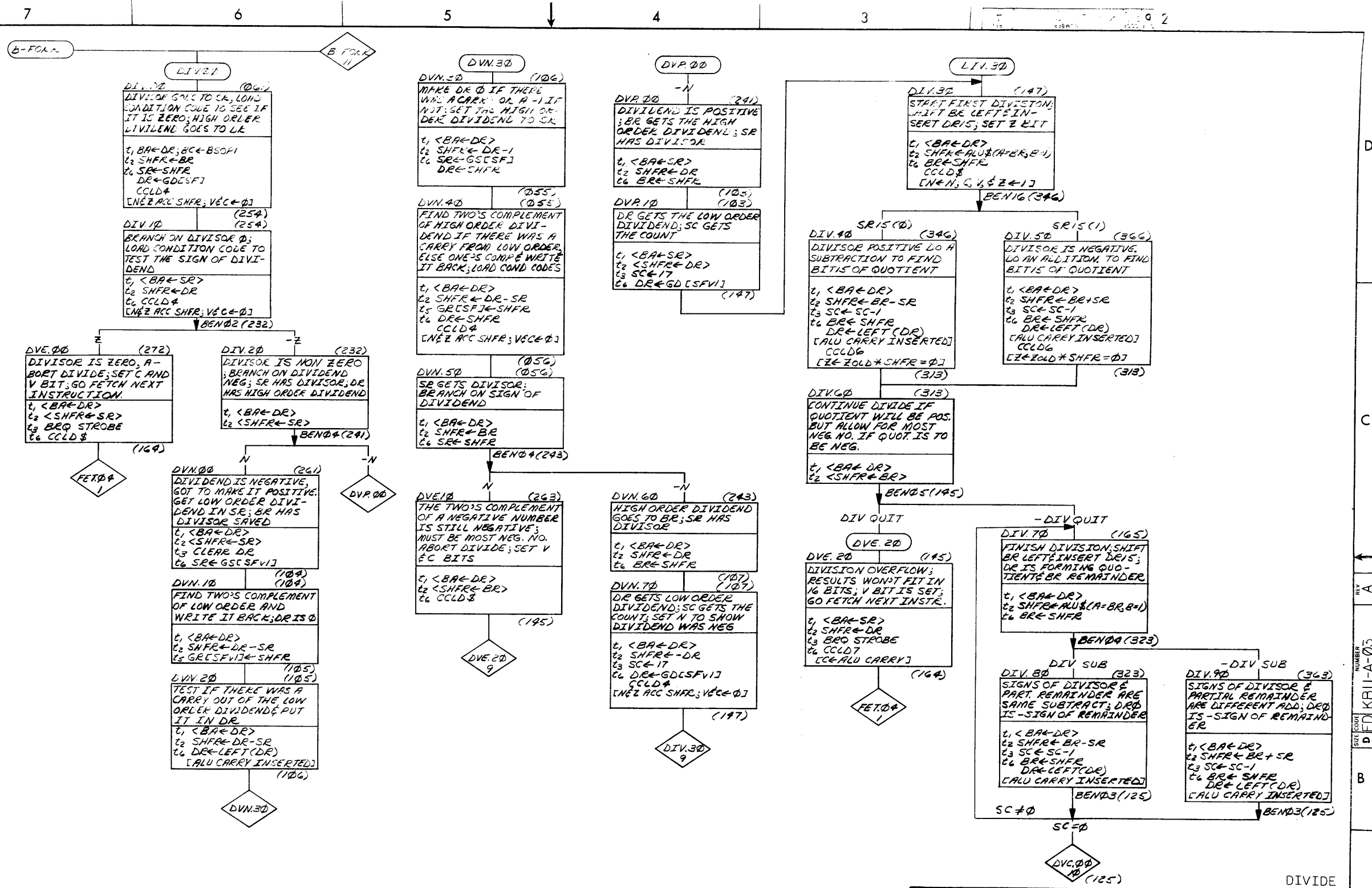
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SIZE CODE NUMBER REV
 D FD KB11-A-03 2 A



| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--|-------------------------|-----------------|--|----------|
| 11/15 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN <i>AK</i> | DATE 3/16/72 | digital CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS .005 XX .02 X .1 | | CHKD. <i>AK</i> | DATE 1/14 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | ENG <i>AK</i> | DATE 1/12/72 | TITLE KB11-A FLOW DIAGRAM (FLOW 8) | |
| MATERIAL | | PROJ. ENG. <i>AK</i> | DATE 1/12/72 | | |
| FINISH | | PROD. <i>AK</i> | DATE 1/12/72 | SIZE CODE NUMBER REV D FD KB11-A-03 A | |
| NEXT HIGHER ASSY. | | SCALE | | | |
| SHEET 9 OF 15 | | DIST | | | |

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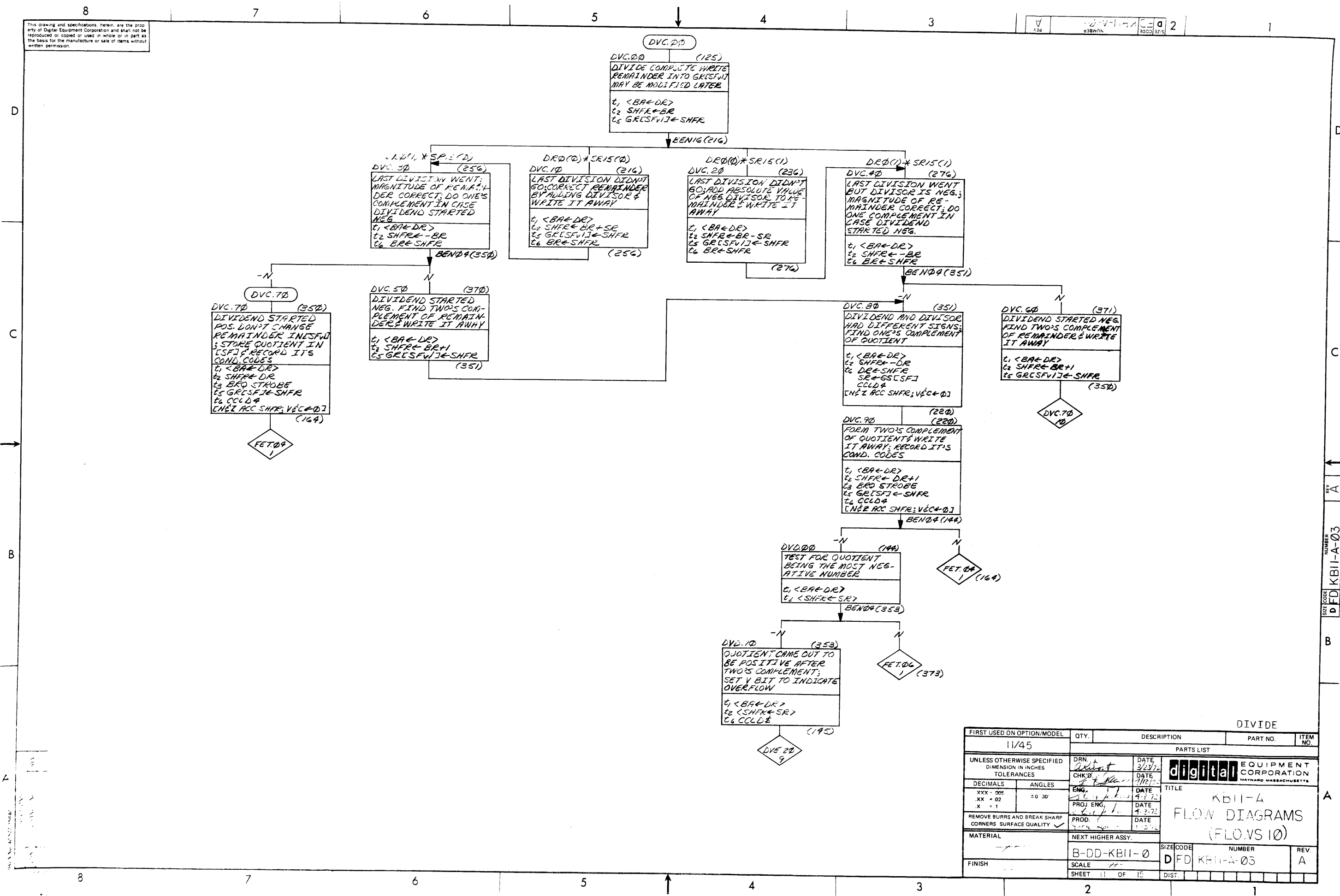


| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|------------------------|--------------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN. DATE 5/1/75 | CHK'D. DATE 4/1/75 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS .XXX = .005 .XX = .02 .X = .1 | ANGLES ±0° 30' | ENG. DATE 4/1/75 | TITLE KPII-A FLOW DIAGRAMS (FLOWS 9) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. DATE 4/1/75 | PROD. DATE 4/1/75 | SIZE CODE NUMBER D F0 KPII-A-05 | |
| MATERIAL # | NEXT HIGHER ASSY. | SCALE | REV A | |
| FINISH | B-DD-KPII-0 | SHEET 10 OF 15 | DIST. | |

DIVIDE

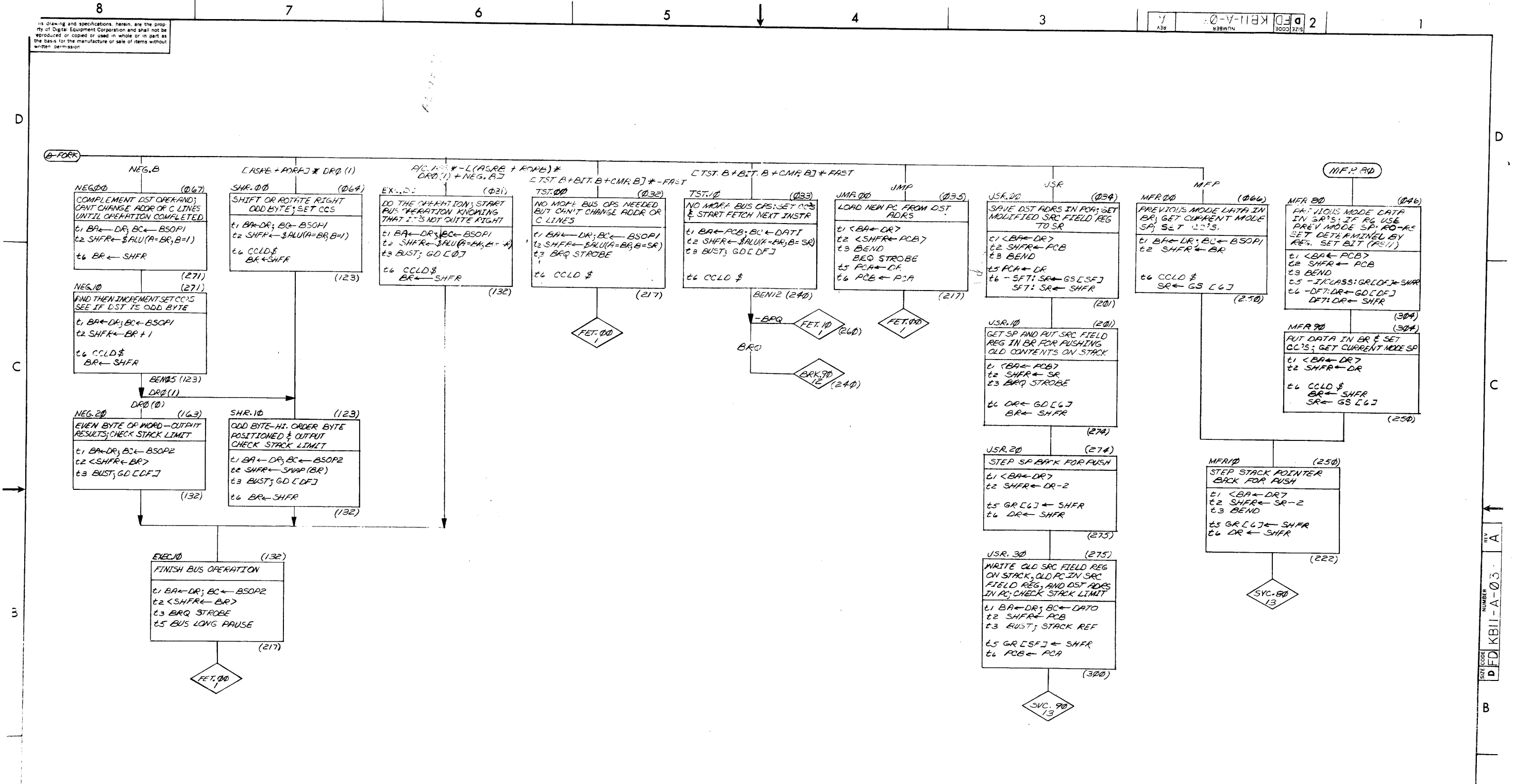
REV. A
NUMBER
D F0 KPII-A-05

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| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|------------------|---|---|--|-----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN CHK'D ENG PROJ ENG PROD | DATE 3/23/72 DATE 11/27/72 DATE 4-2-72 DATE 1-2-72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE KBII-A FLOW DIAGRAMS (FLOVS 10) | |
| DECIMALS XXX - 005 XX - 02 X - 1 | ANGLES ± 0 30 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | | SCALE | | DFD | KBII-A-03 |
| SHEET 11 OF 15 | | DIST | | | REV. A |

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| EXECUTE - MEM REF | | | |
|---|-------------------|-------------|--------------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. |
| 11/45 | | | |
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN | DATE | |
| DECIMALS ANGLES | CHKD | DATE | |
| .xxx = .005 xx = .02 x = .1 | ENG | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. | DATE | |
| | PROD. | DATE | |
| MATERIAL | NEXT HIGHER ASSY. | | |
| FINISH | | | |
| B-DD-KBII-0 | | SIZE CODE | NUMBER |
| SCALE | | D | FD KBII-A-03 |
| SHEET 12 OF 15 | | DIST. | |

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
TITLE
KBII-A
FLOW DIAGRAMS (FLO IS II)

SIZE CODE
D
FD KBII-A-03
NUMBER
A

A

B

A

C

D

D

C

B

A

8

7

6

5

4

3

2

1

8

7

6

5

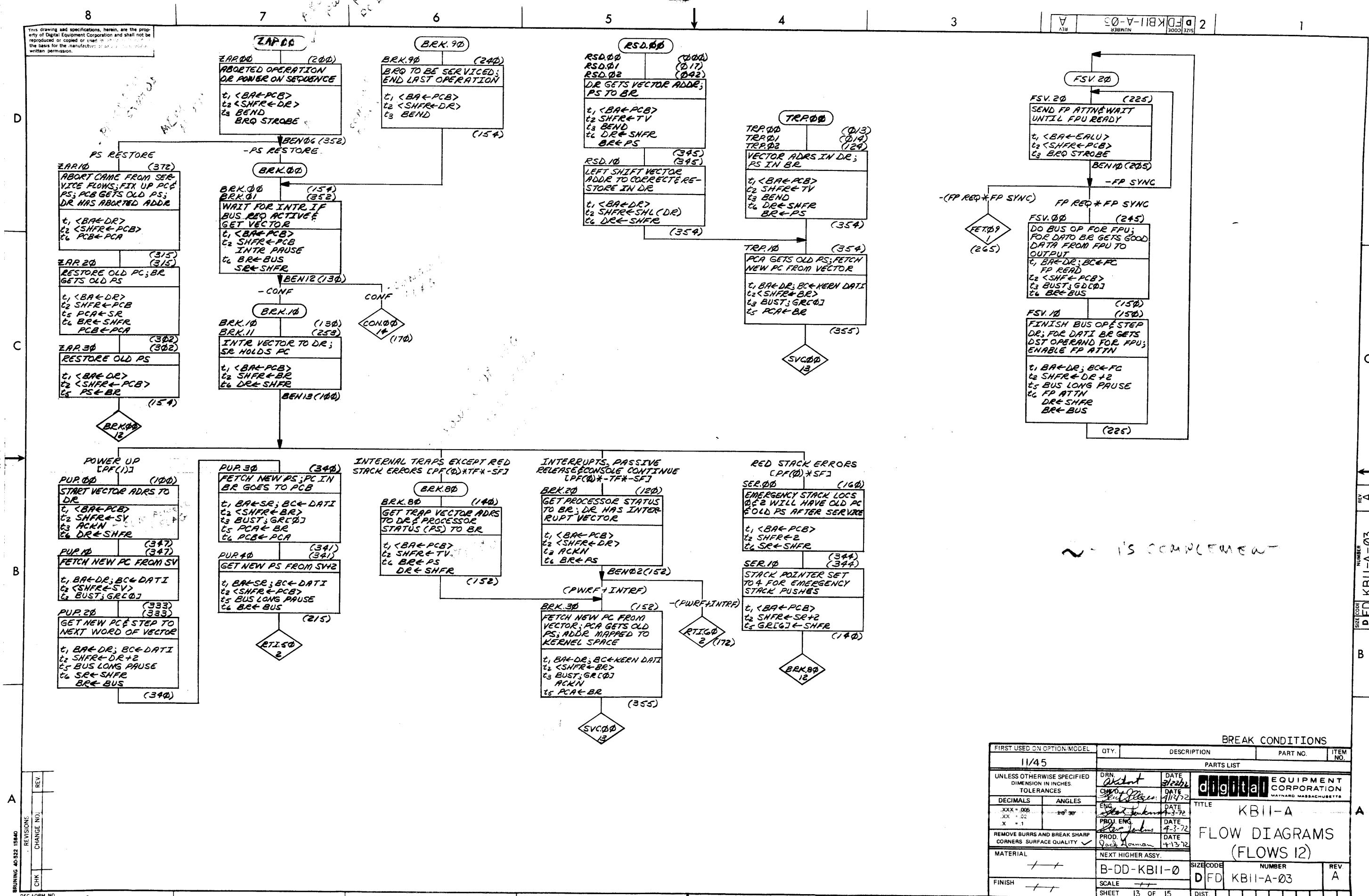
4

3

2

1

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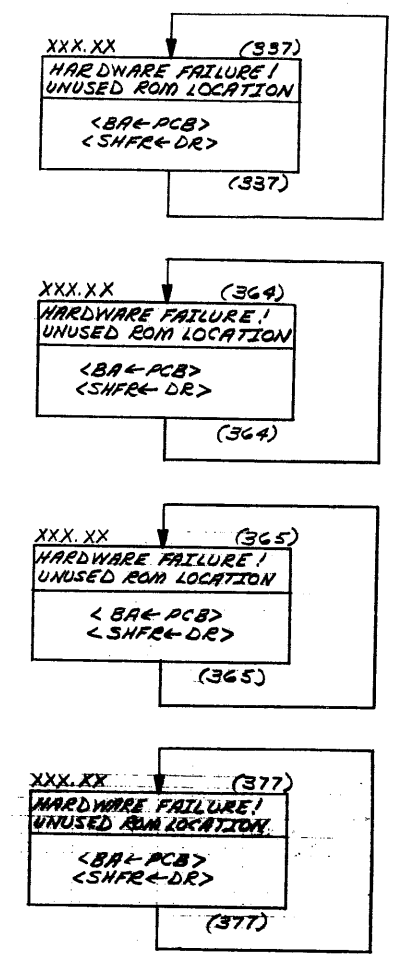
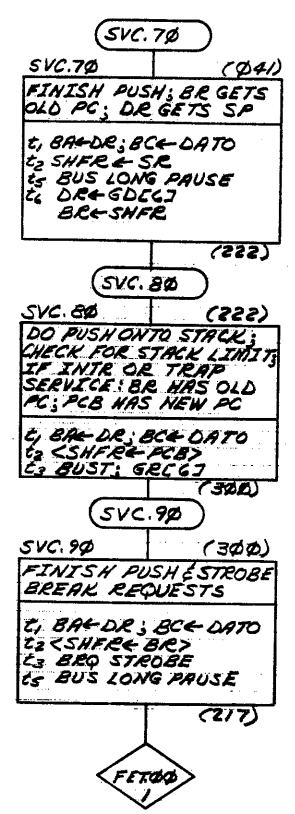
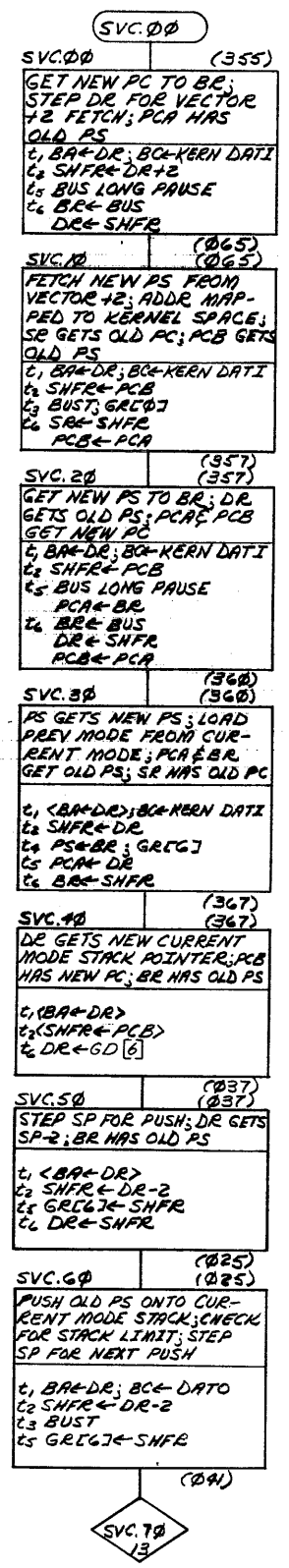
~ IS COMPLEMENT

| REV | CHANGE NO. |
|-----|------------|
| | |

| BREAK CONDITIONS | | | |
|---|------------------------------|---------------------|---|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. ITEM NO. |
| 11/45 | | | |
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN. <i>Antant</i> | DATE <i>3/22/72</i> | digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small> |
| DECIMALS ANGLES | CHKD. <i>John Jones</i> | DATE <i>11/4/72</i> | |
| .XXX ± .005 .XX ± .02 X ± .1 | ENG. <i>John Jones</i> | DATE <i>4-3-72</i> | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. <i>John Jones</i> | DATE <i>4-3-72</i> | |
| MATERIAL | PROD. <i>John Jones</i> | DATE <i>4-3-72</i> | |
| FINISH | Next Higher Assy. | | |
| | B-DD-KBII-0 | SIZE CODE | NUMBER |
| | SCALE | DFD | KBII-A-03 |
| | SHEET 13 OF 15 | DIST. | REV A |

TITLE
KBII-A
FLOW DIAGRAMS
(FLOWS 12)

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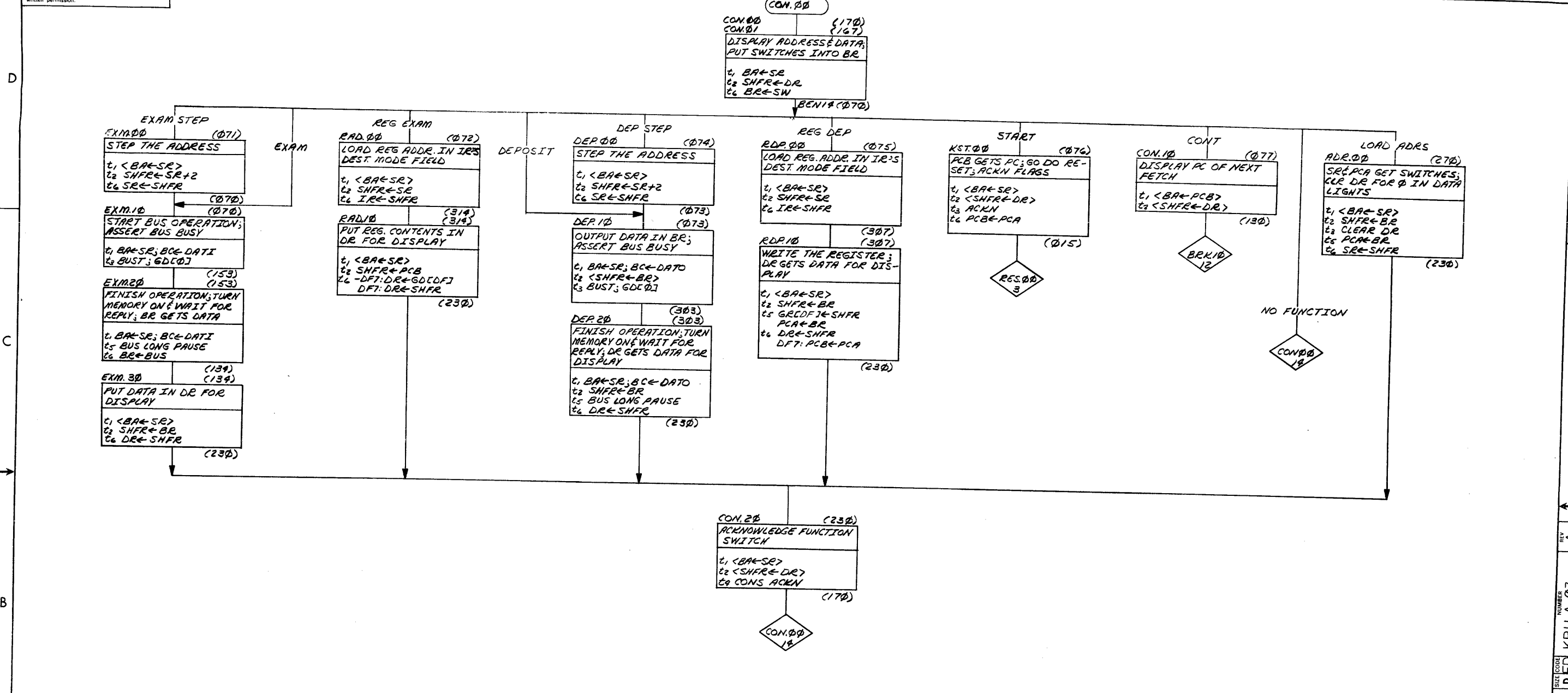


| | |
|------------|--|
| REV | |
| CHK | |
| CHANGE NO. | |

| SERVICE SEQUENCE | | | |
|--|------------|-------------|--|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. ITEM NO. |
| 11/45 | | | |
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS |
| DECIMALS | CHK'D | DATE | |
| ANGLES | ENG. | DATE | TITLE KBII-A FLOW DIAGRAMS (FLOWS 13) |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. | DATE | |
| MATERIAL | PROD. | DATE | NUMBER KBII-A-03 REV. A |
| FINISH | SCALE | SHEET | |

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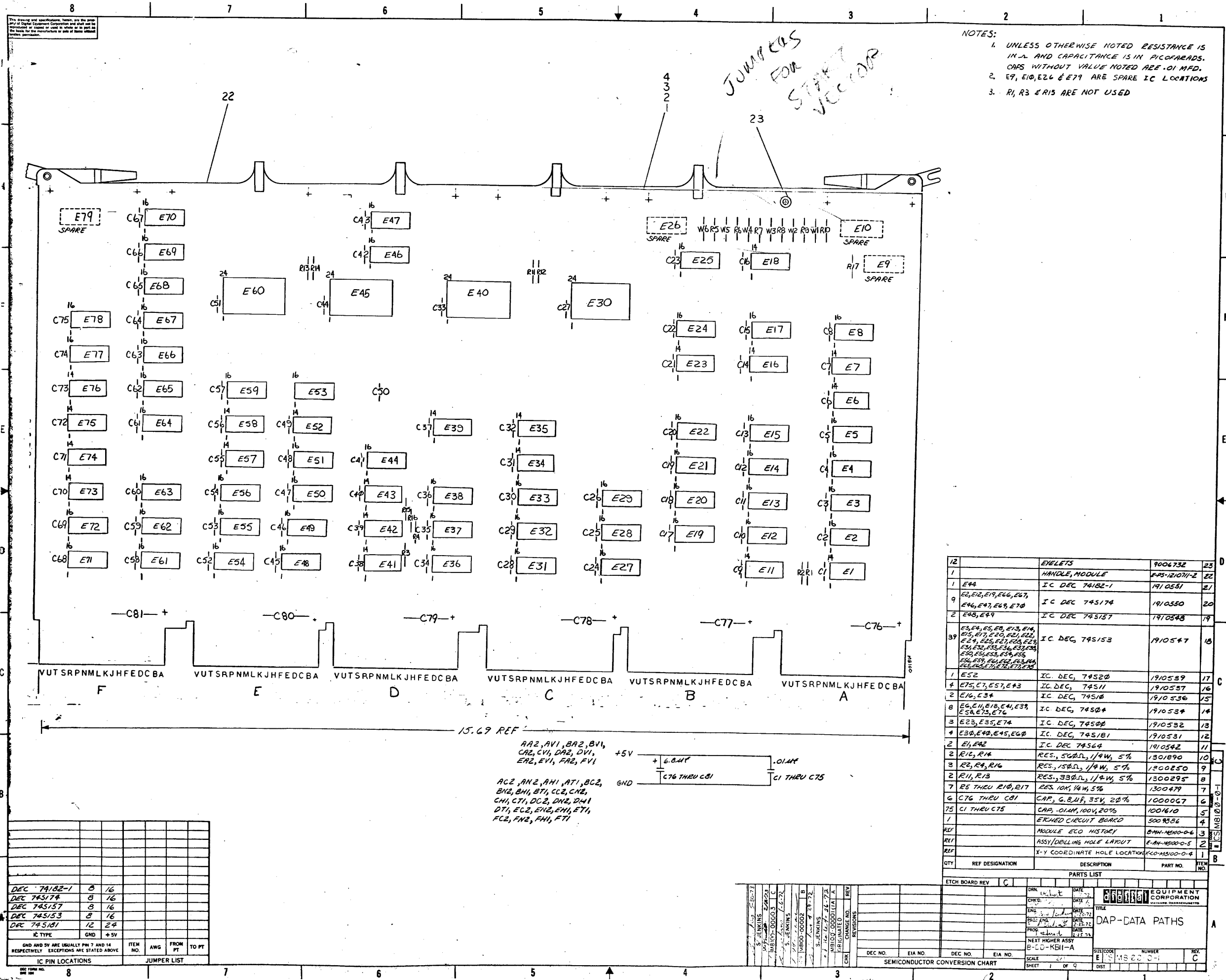
SIZE CODE 2
 NUMBER DFD KB11-A-03
 REV A



| REV | CHG | NO |
|-----|-----|----|
| | | |

| | | | | |
|---|----------------|---------------------------------------|---|----------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS .xxx = .005 .xx = .02 .x = .1 | ANGLES ±0° 30' | DRN CHK'D ENG PROD. | DATE 3/21/72 4/12/72 4-3-72 4-13-72 | DATE |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| FINISH | | | | |
| NEXT HIGHER ASSY. | | TITLE | | |
| B-DD-KB11-0 | | KB11-A FLOW DIAGRAMS (FLOWS 14) | | |
| SCALE | SHEET 15 OF 15 | SIZE CODE | NUMBER | REV. |
| | | DFD KB11-A-03 | | A |

BRUNING 40-522 15840
 DEC 1969 NO
 1, RD. 102-B

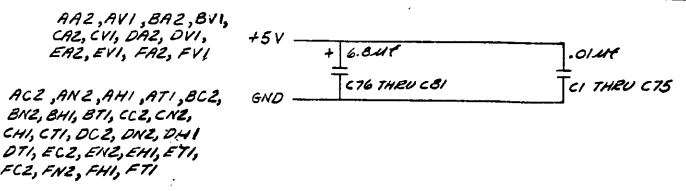


JUMPER FOR START VECTOR

- NOTES:
- UNLESS OTHERWISE NOTED RESISTANCE IS IN OHMS AND CAPACITANCE IS IN PICO FARADS. CAPS WITHOUT VALUE NOTED ARE .01 MFD.
 - E9, E10, E26 & E79 ARE SPARE IC LOCATIONS
 - R1, R3 & R15 ARE NOT USED

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|--|---|--------------------|----------|
| 12 | | EXLETS | 9006732 | 23 |
| 1 | | HANDLE, MODULE | FPS-121071-2 | 22 |
| 1 | E44 | IC DEC 74182-1 | 1910531 | 21 |
| 9 | E2, E12, E19, E66, E67, E46, E47, E48, E70 | IC DEC 745174 | 1910550 | 20 |
| 2 | E48, E49 | IC DEC 745157 | 1910548 | 19 |
| 39 | E34, E5, E8, E13, E14, E15, E17, E20, E21, E22, E23, E24, E25, E27, E28, E29, E31, E32, E33, E34, E35, E36, E37, E38, E39, E40, E41, E42, E43, E44, E45, E46, E47, E48, E49, E50, E51, E52, E53, E54, E55, E56, E57, E58, E59, E60, E61, E62, E63, E64, E65, E66, E67, E68, E69, E70, E71, E72, E73, E74, E75, E76, E77, E78 | IC DEC 745153 | 1910547 | 18 |
| 1 | E52 | IC DEC 74520 | 1910589 | 17 |
| 4 | E75, E7, E57, E43 | IC DEC 74511 | 1910587 | 16 |
| 2 | E16, E34 | IC DEC 74510 | 1910536 | 15 |
| 8 | E6, E11, E18, E4, E37, E58, E73, E76 | IC DEC 74504 | 1910534 | 14 |
| 3 | E23, E35, E74 | IC DEC 74500 | 1910532 | 13 |
| 4 | E30, E40, E45, E60 | IC DEC 745181 | 1910531 | 12 |
| 2 | E1, E42 | IC DEC 74564 | 1910542 | 11 |
| 2 | R10, R14 | RES., 500Ω, 1/4W, 5% | 1301890 | 10 |
| 3 | R2, R4, R16 | RES., 150Ω, 1/4W, 5% | 1300250 | 9 |
| 2 | R11, R13 | RES., 330Ω, 1/4W, 5% | 1300295 | 8 |
| 7 | R5 THRU R10, R17 | RES. 10K, 1/4W, 5% | 1300479 | 7 |
| 6 | C76 THRU C81 | CAP., G.B.M.F., 35V, 20% C1 THRU C75 | 1000067 1001610 | 6 5 |
| 1 | | ETCHED CIRCUIT BOARD | 5009356 | 4 |
| REF | | MODULE ECO HISTORY | B4W-M100-0-6 | 3 |
| REF | | ASSY/DRILLING HOLE LAYOUT | E-AN-M100-0-5 | 2 |
| REF | | X-Y COORDINATE HOLE LOCATION | KCO-M100-0-4 | 1 |

| DEC | IC TYPE | QTY | REF |
|---------|---------|-----|-----|
| 74182-1 | B | 16 | |
| 745174 | B | 16 | |
| 745157 | B | 16 | |
| 745153 | B | 16 | |
| 745181 | 12 | 24 | |



SEMICONDUCTOR CONVERSION CHART

DATE: 10/22/72

DESIGNER: S. JENKINS

ETCH BOARD REV: C

SCALE: 1" = 1" Q

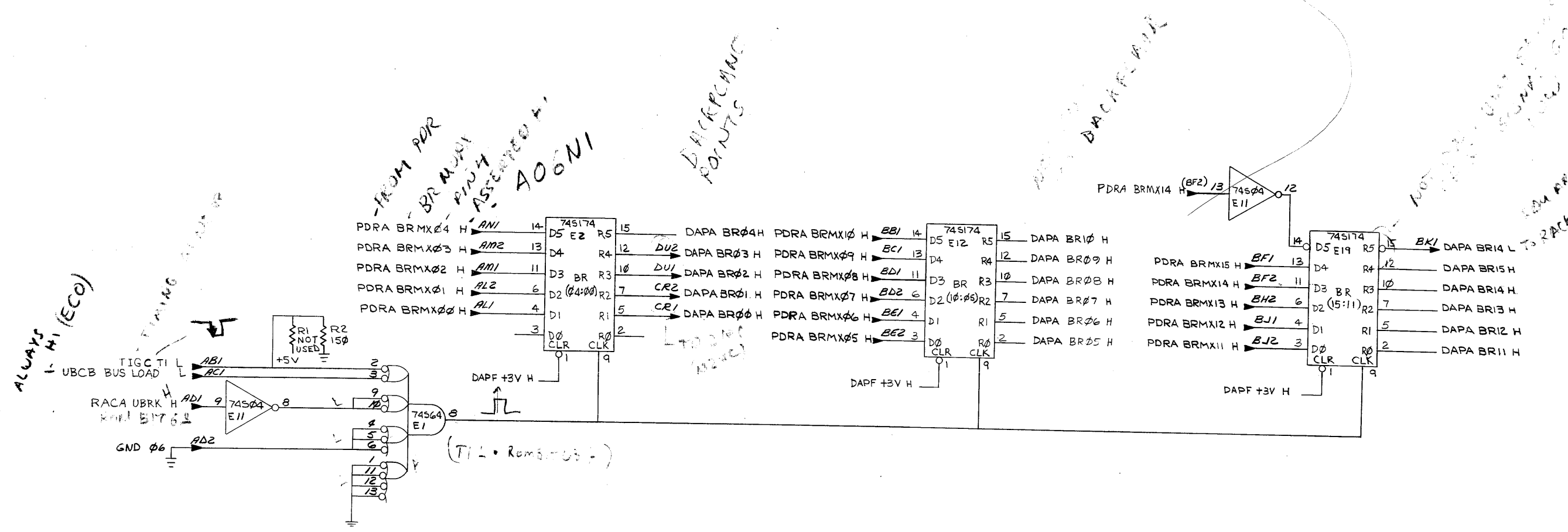
SHEET: 1 OF 9

| IC PIN LOCATIONS | JUMPER LIST |
|--|-------------|
| GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE. | |

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1-0-0018W5J0 2

D
C
B
A



| | |
|-------------|--|
| REV | |
| CHANGE N.Y. | |
| CHK | |

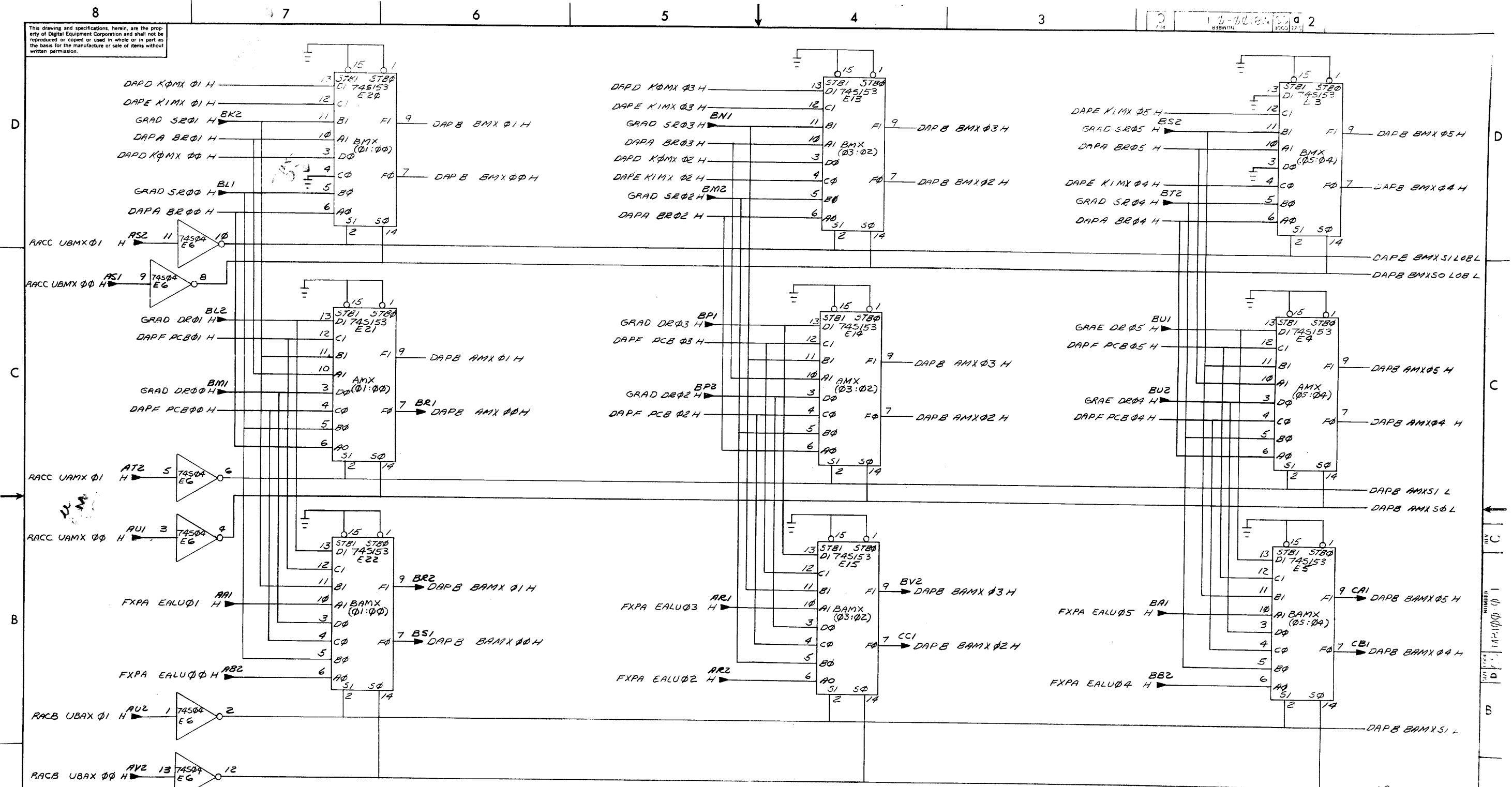
| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|-------------------|-------------|--|-------------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| | | CHKD | DATE | | |
| DECIMALS | ANGLES | ENG | DATE | TITLE DATA PATHS (DAPA) | |
| .XXX = .005 | = 0° 30' | PROL. ENG. | DATE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. | DATE | | |
| MATERIAL | | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | | B-DD-KB11A | | D | CSM8100-0-1 |
| | | SCALE | | DIST | |
| | | SHEET | 2 OF 9 | | |

102-B

8 7 6 5 4 3 2 1

REV C
NUMBER
DCSM8100-0-1
SHEET 2 OF 9

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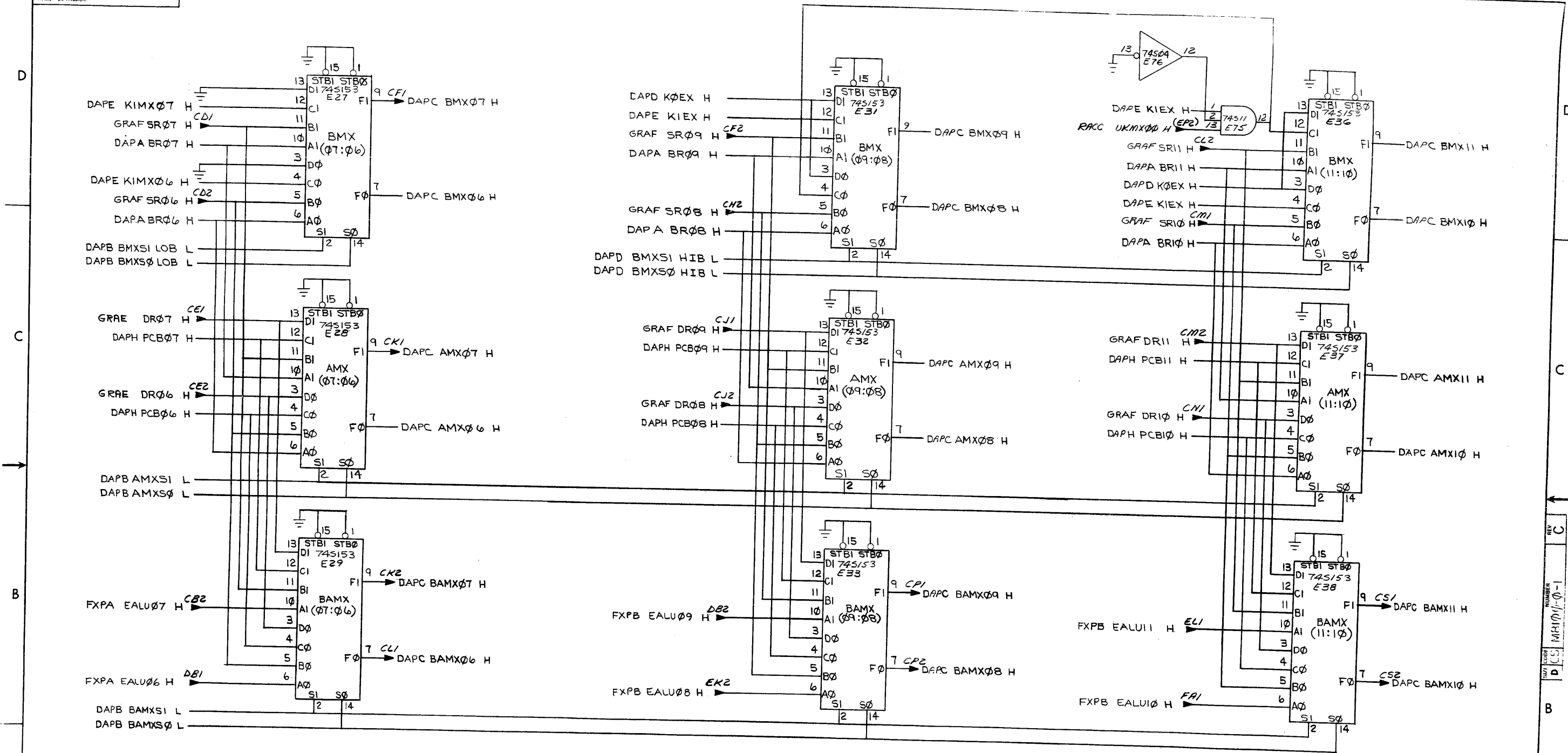
| UBAX $\Phi 1$ | $\Phi \Phi$ | UAMX $\Phi 1$ | $\Phi \Phi$ | UBMX $\Phi 1$ | $\Phi \Phi$ |
|---------------|-------------|---------------|-------------|---------------|-------------|
| L | L DR | L | L DR | L | L K0MX |
| H | H PCB | L | H PCB | L | H K1MX |
| H | L SR | H | L SR | H | L SE |
| H | H FP MAINT | H | H BR | H | H BR |

| B,A & BUS ADDR. MULTIPLEXERS (05:00) | | SLOT 6 | |
|---|---------------------|--|----------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. |
| 11/45 | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | |
| DECIMALS | ANGLES | TITLE | |
| XXX = .005 | $\pm 0^{\circ} 30'$ | DATA PATHS | |
| XX = .02 | | PARTS LIST | |
| X = .1 | | REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | |
| MATERIAL | | NEXT HIGHER ASSY. | |
| FINISH | | SCALE | |
| | | SHEET 3 OF 5 | |

| REV | CHG | IND | DATE |
|-----|-----|-----|------|
| | | | |

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1-0-00187.30 2
 NUMBER 1000 31/5

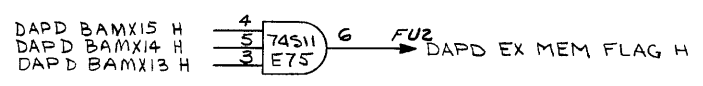
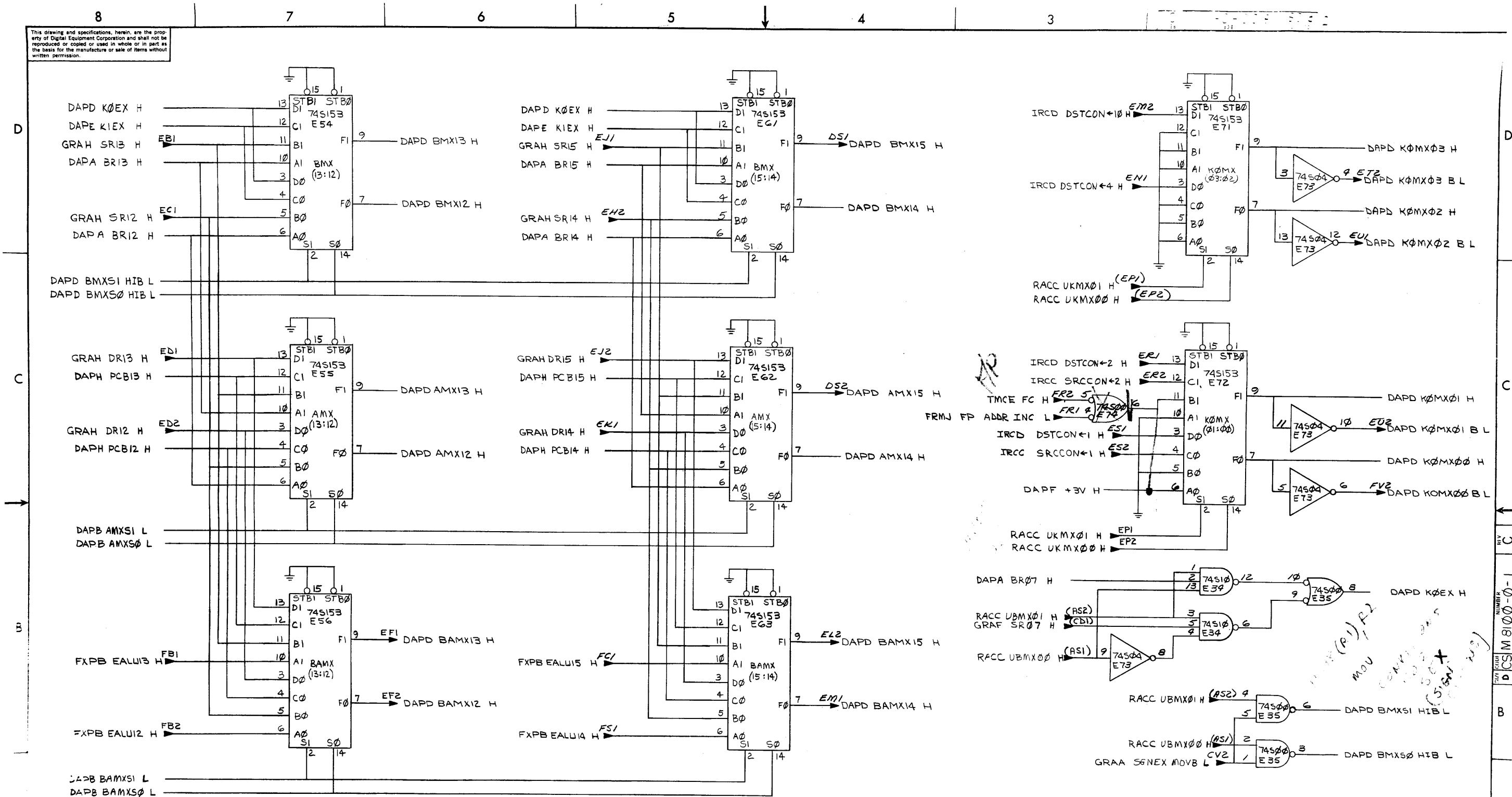


| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--|--------------|-------------|---|-----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS .XXX = .005 .XX = .02 .X = .1 | | CHK'D | DATE | | |
| ANGLES ±0° 30' | | ENG | DATE | TITLE DATA PATHS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | | PROJ/ENG | DATE | | |
| MATERIAL | | PROD. | DATE | NEXT HIGHER ASSY. B-00-KB11-A | |
| FINISH | | SCALE | DATE | | |
| | | SHEET 4 OF 9 | DIST. | SIZE CODE | NUMBER |
| | | | | DCS | MS100-0-1 |

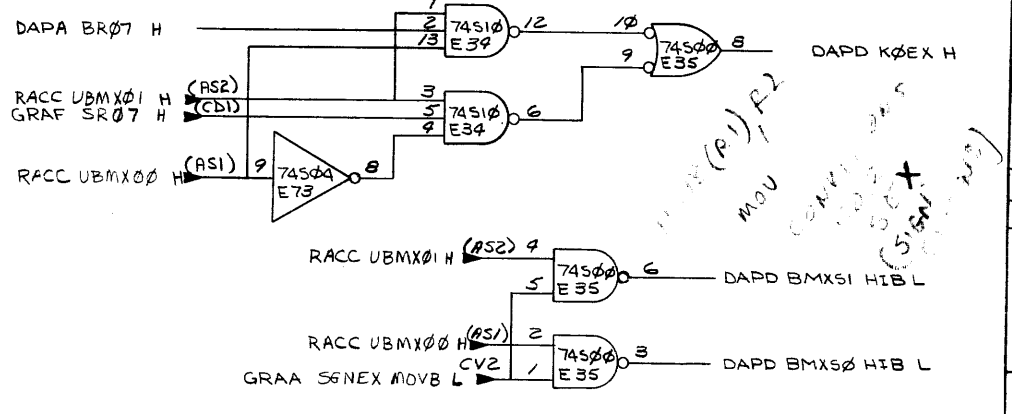
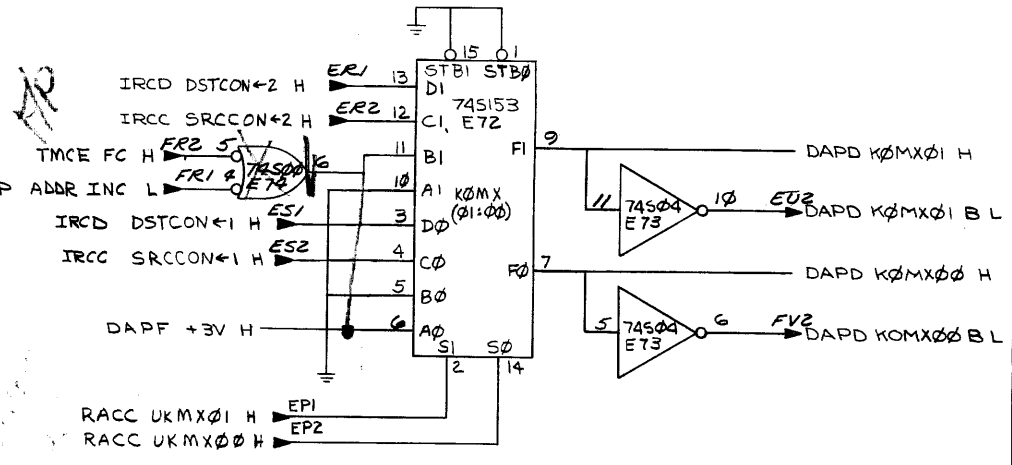
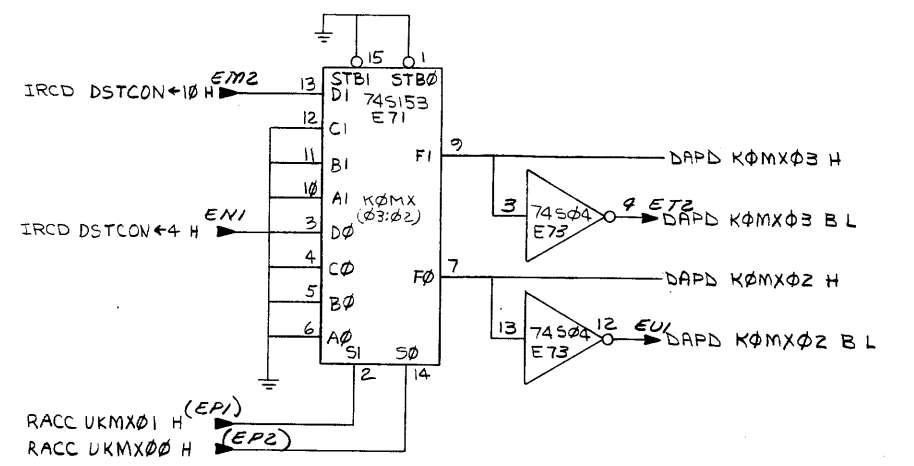
| | | | |
|-----|-----|------|----|
| REV | NO. | DATE | BY |
| | | | |
| | | | |

REV C
 REV B
 REV A
 DCS: MARI/1-0-1
 DCS: MARI/1-0-1

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| | | | |
|-----------------|---|---|--------|
| UKMX 01 00 K0MX | L | L | 1 |
| | L | H | 2 |
| | H | L | SRCCON |
| | H | H | DSTCON |



BA 6 BUS ADDR, MULTIPLEXERS (15:12); K0MX SLOT6

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------|--|----------|----------------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | TITLE | | |
| XXX - .005 | ±0° 30' | DATA PATHS | | |
| XX - .02 | | | | |
| X - .1 | | REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | |
| MATERIAL | | | | |
| NEXT HIGHER ASSY. | | | | |
| FINISH | | | | |
| SCALE | | SIZE CODE | | NUMBER |
| SHEET 5 OF 9 | | B-DD KB11-A | | DCS M 8100-0-1 |

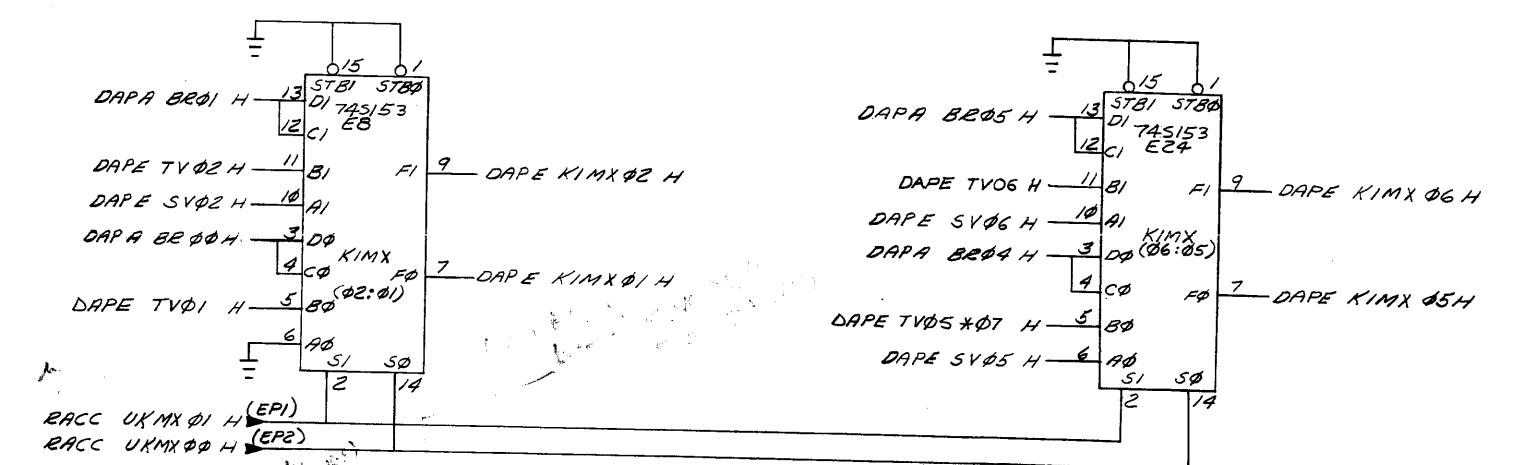
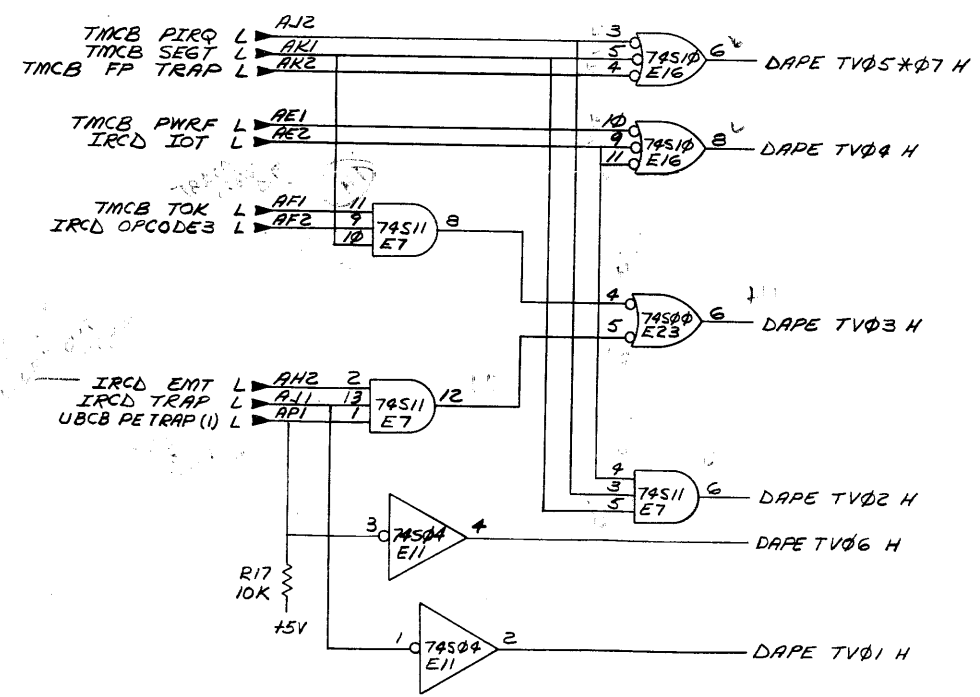
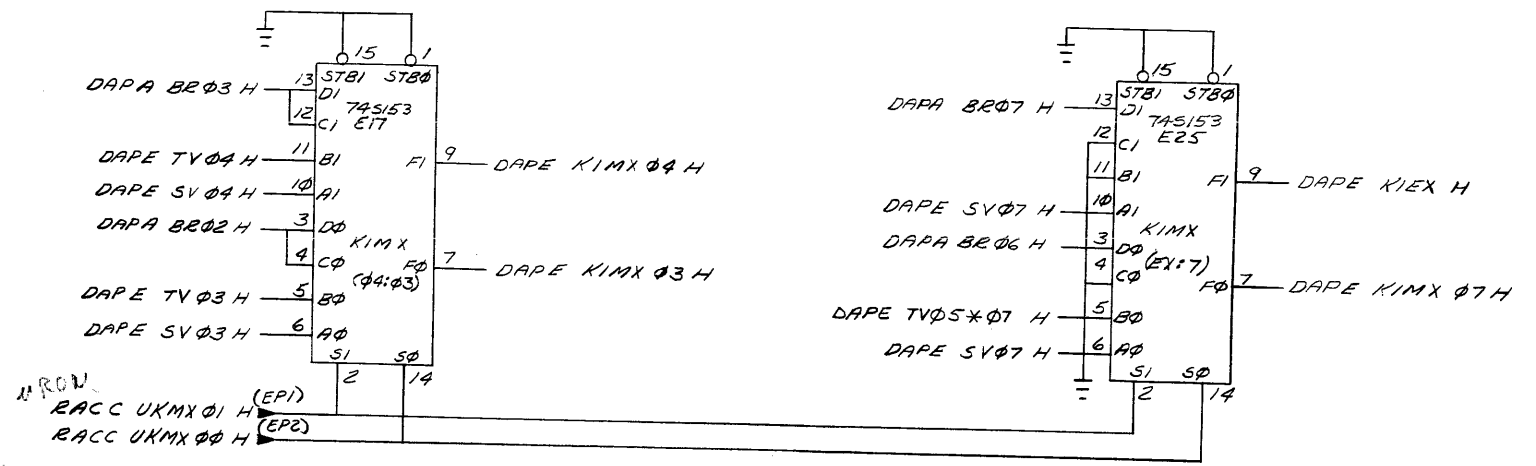
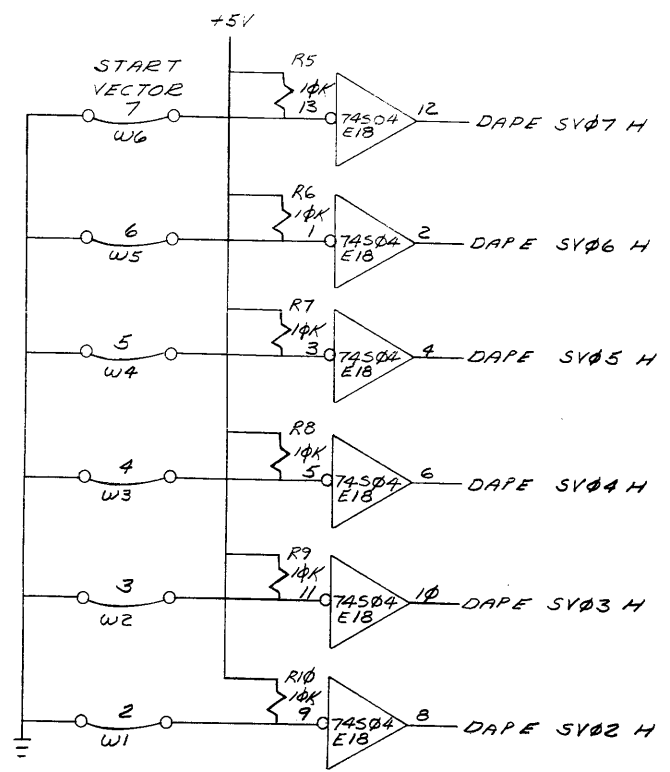
NUMBER 8100-0-1
 DCS M 8100-0-1
 1/71

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JUMPER ARRANGEMENT

| | |
|--------|--------------|
| WG IN | 173200 + XXX |
| WG OUT | 000000 + XXX |

XXX OFFSET (7BITS)
BITS 00001 ALWAYS 0



TRAP VECTOR

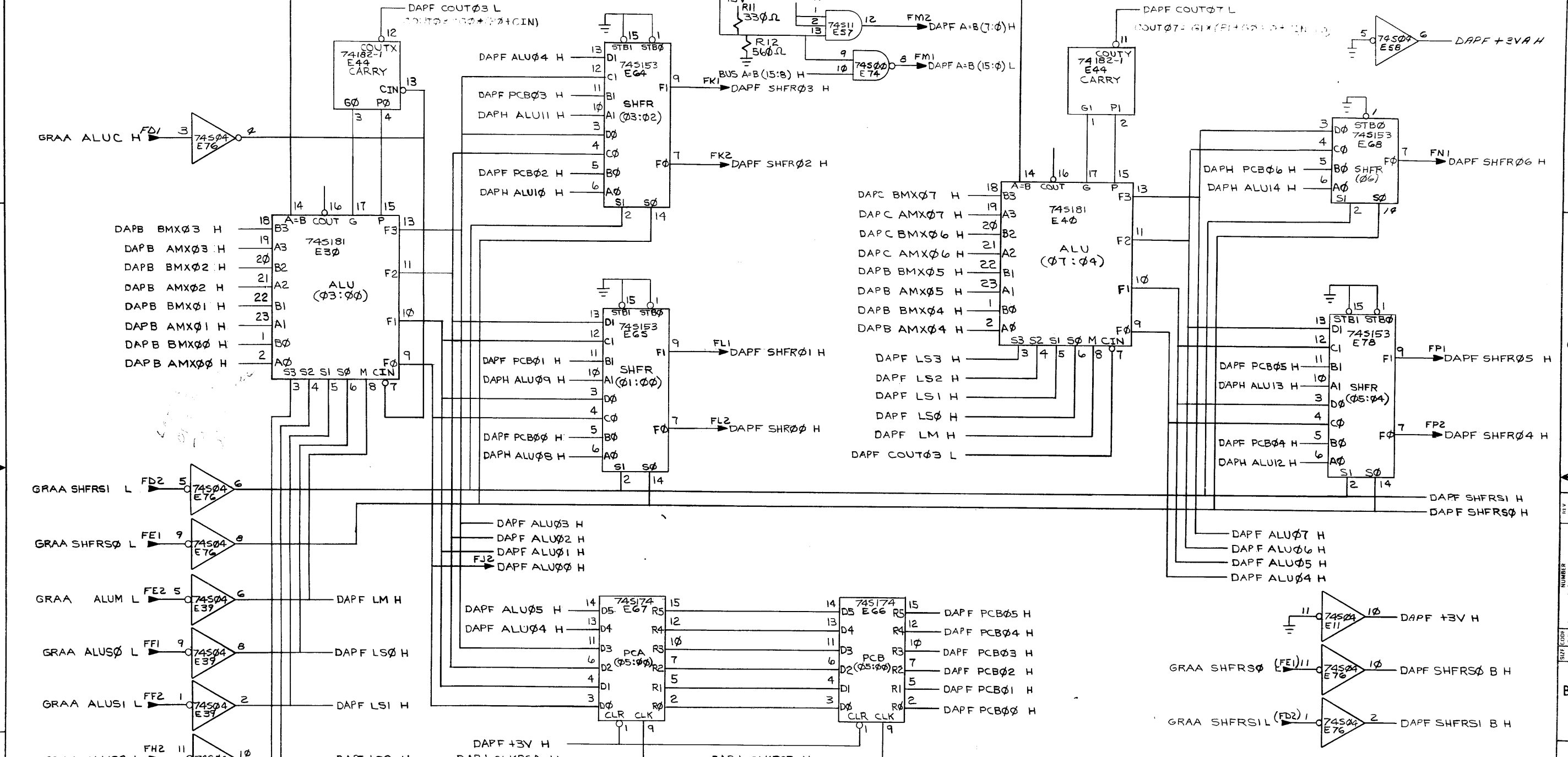
| RSVD INST | UKMX 01 | 00 | KIMX |
|-----------|---------|----|-------------------------|
| TOK+3 | L | L | SV |
| IOT | L | H | TV |
| PWR F | H | L | SOB & MARK DISPLACEMENT |
| EMT | H | H | BEXX DISPLACEMENT |

NOTE:
LEFT SHIFTING TAKES PLACE ON FLOWS 12 RSD.10

TRAP VECTORS, START VECTOR, & KIMX SLOT 6

| | | | | |
|--|--------------------|-----------------|--|--------------------------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. CHK'D | DATE 7-12-71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS .XXX = .005 .XX = .02 .X = .1 | ENG. PROJ. ENG. | DATE 2/2/72 | TITLE DATA PATHS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD. | DATE 2/2/72 | MATERIAL NEXT HIGHER ASSY. | |
| FINISH | SCALE | SHEET 6 OF 9 | SIZE CODE B-DD-KB11-A | NUMBER D CS MB100-0-1 |

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| SHFR | SI | S0 | H |
|------|----|----|----------------|
| L | L | L | SWAB (OB SWAP) |
| L | H | L | PCB |
| H | L | L | ALU |
| H | H | L | RT. SHIFT ALU |

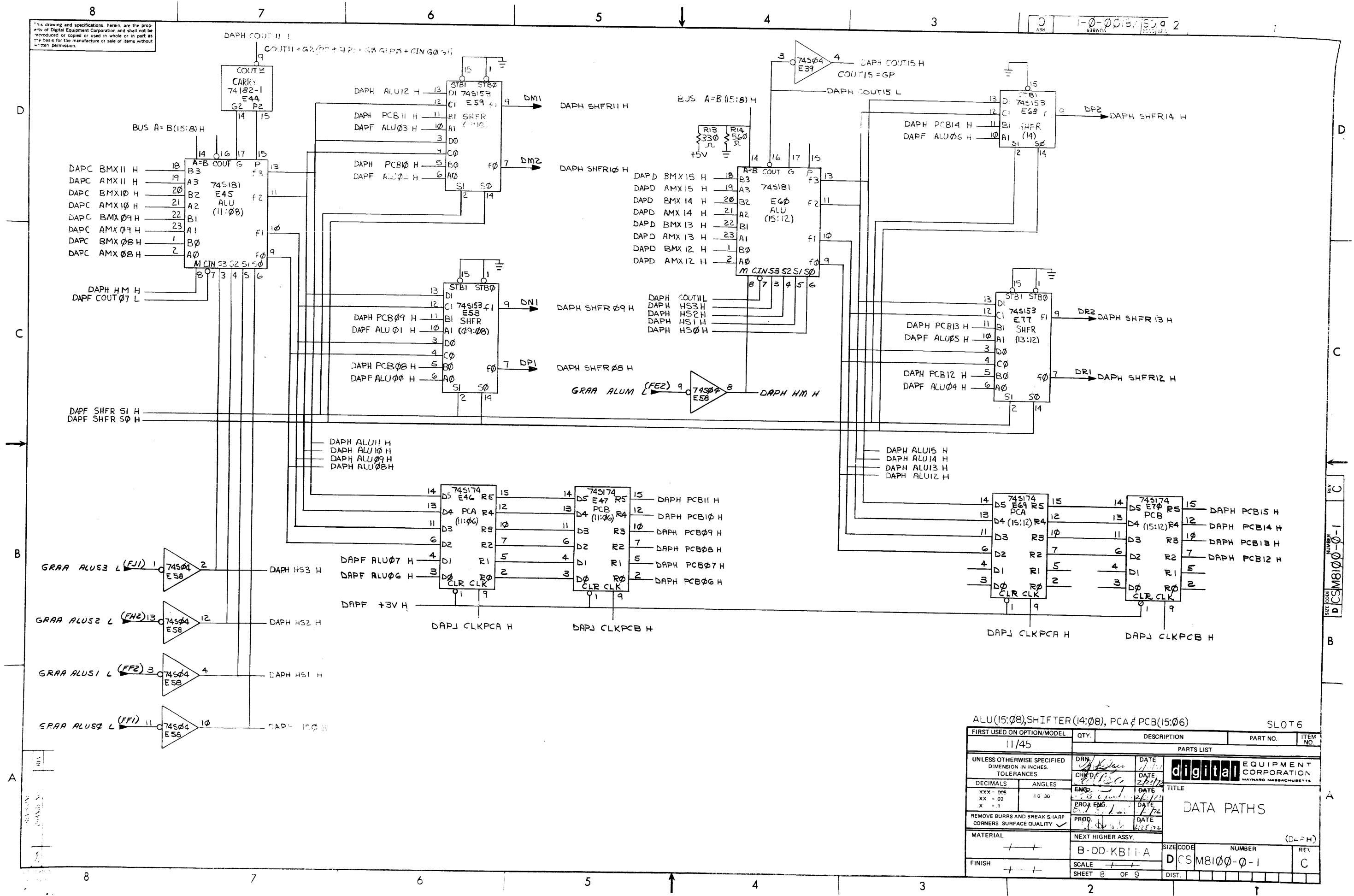
| 745181 - ALU | | ALU (07:00), SHIFTER (06:00), PCA & PCB (05:00) | | SLOT6 | |
|---------------------|----------------------------|---|------|-------------|----------|
| M=H LOGIC FUNCTIONS | M=L; ARITHMETIC OPERATIONS | FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. |
| S3 S2 S1 S0 | C _N =0=H | 11/45 | | | |
| L L L L | F=A | | | | |
| L L H H | F=A MINUS 1 (250M) | | | | |
| L H H H | F=A MINUS B MINUS 1 | | | | |
| L H H H | F=A B | | | | |
| H L L H | F=A PLUS B | | | | |
| H L H L | F=(A+B) PLUS AB | | | | |
| H L H H | F=AB | | | | |
| H H L L | F=A PLUS A | | | | |
| H H H L | F=(A+B) PLUS A | | | | |
| H H H H | F=A | | | | |

| PARTS LIST | | TITLE | |
|-------------------|---------|-------------------|--|
| DRN. | DATE | TITLE | |
| 11/45 | 7-12-71 | DATA PATHS (DAPF) | |
| CHK'D | DATE | REVISIONS | |
| ENG. | DATE | 1 | |
| PROJ. ENG. | DATE | 2 | |
| PROD. | DATE | 3 | |
| MATERIAL | | 4 | |
| FINISH | | 5 | |
| NEXT HIGHER ASSY. | | 6 | |
| SCALE | | 7 | |
| SHEET 7 OF 9 | | 8 | |

| REV. | DESCRIPTION | DATE |
|------|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |

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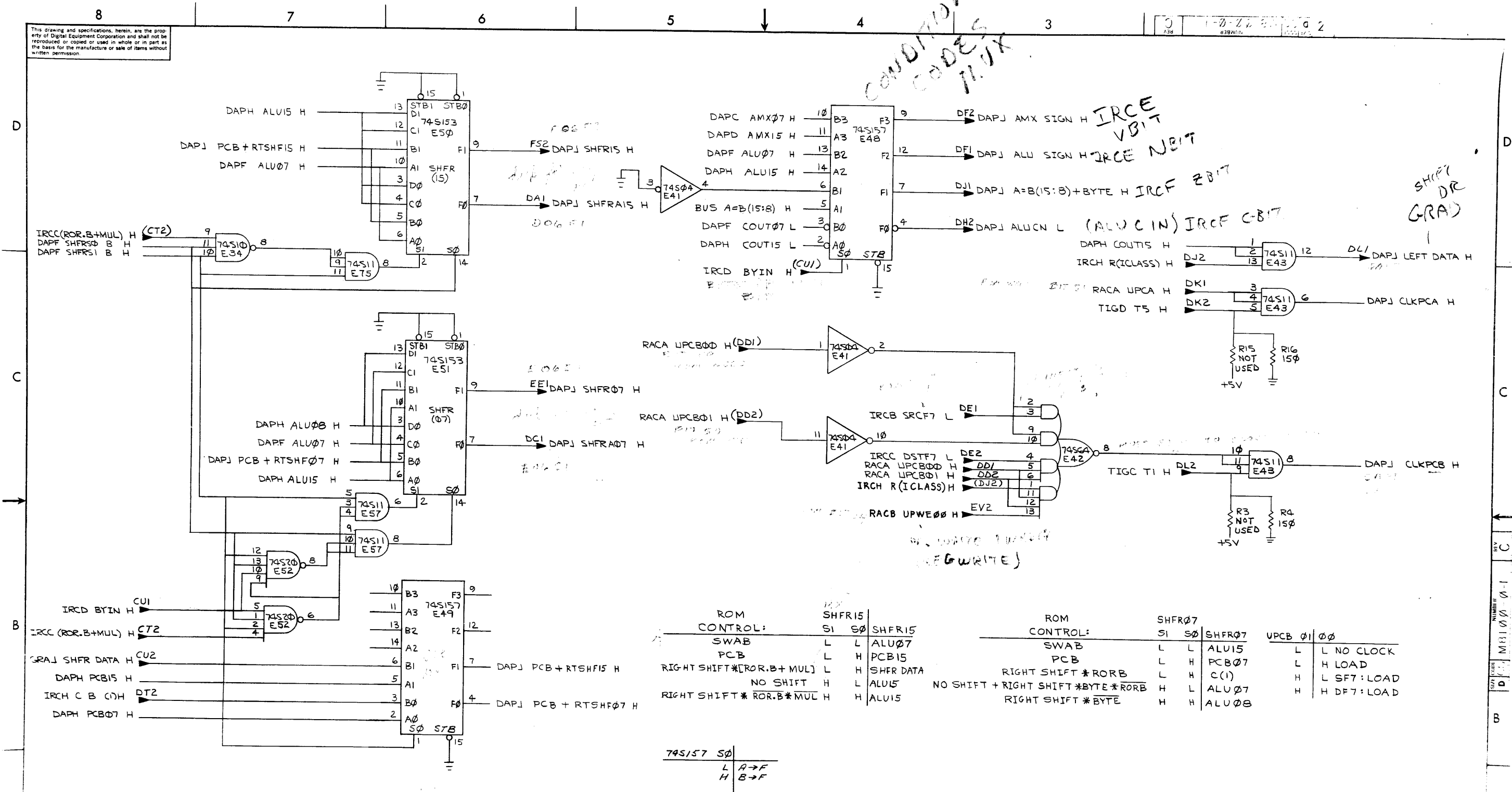
1-0-001350 2



| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|-------------------|--|-------------------------------|----------|
| 11/45 | | | ALU(15:08), SHIFTER (14:08), PCA & PCB (15:06) | | SLOT 6 |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRW | DATE | digital EQUIPMENT CORPORATION | |
| DECIMALS | ANGLES | CHK'D | DATE | MAYNARD MASSACHUSETTS | |
| XXX - .005 | XX - .02 | ENG | DATE | TITLE | |
| X - .1 | ±0°30' | PROJ ENG | DATE | DATA PATHS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD | DATE | | |
| MATERIAL | | NEXT HIGHER ASSY. | | (D-F-H) | |
| FINISH | | B-DD-KB11-A | SCALE | SIZE CODE | NUMBER |
| | | | | DCS M8100-0-1 | REV |
| | | SHEET 8 OF 9 | DIST. | | C |

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CONDITIONAL CODES MIX

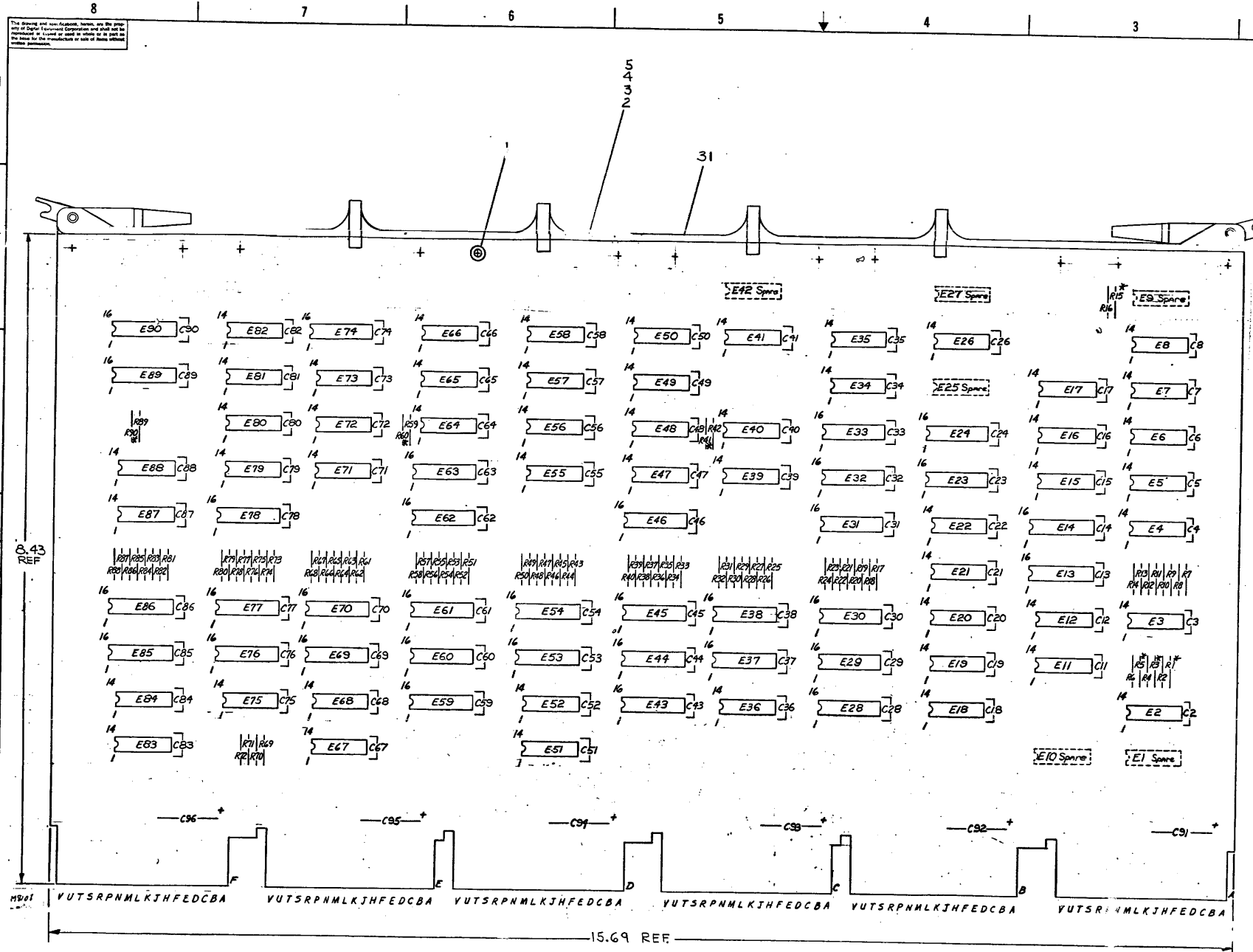


| ROM CONTROL: | | SHFR15 | SHFR15 |
|--------------|-----|--------|-----------|
| SWAB | PCB | L | H |
| L | L | L | ALU07 |
| L | H | H | PCB15 |
| L | L | H | SHFR DATA |
| H | L | L | ALU15 |
| H | H | H | ALU15 |

| ROM CONTROL: | | SHFR07 | SHFR07 | UPCB 01 | 00 |
|--------------|-----|--------|--------|---------|------------|
| SWAB | PCB | L | H | L | H |
| L | L | L | ALU15 | L | L NO CLOCK |
| L | H | H | PCB07 | L | H LOAD |
| L | L | H | C(1) | H | L SF7:LOAD |
| H | L | H | ALU07 | H | H DF7:LOAD |
| H | H | H | ALU08 | | |

| | | |
|-----------|---|-----|
| 74S157 S0 | L | A→F |
| | H | B→F |

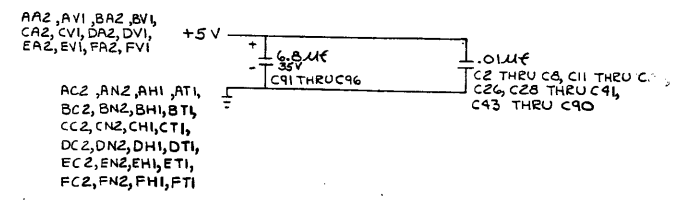
| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------------------|------|-------------|---|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. <i>[Signature]</i> | DATE | 8-12-71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | CHK'D. <i>[Signature]</i> | DATE | 2/8/72 | | |
| ANGLES | ENG. <i>[Signature]</i> | DATE | 2/25/72 | | |
| .XXX ± .005 .XX ± .02 .X ± .1 | PROJ. ENG. <i>[Signature]</i> | DATE | 2/15/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD. <i>[Signature]</i> | DATE | | TITLE DATA PATHS | |
| MATERIAL | NEXT HIGHER ASSY | | | | |
| FINISH | B-DD | | | DCS MB100-0-1 | |



- NOTES:
1. UNLESS OTHERWISE NOTED RESISTANCE IS IN OHMS & CAPACITANCE IS IN PICO FARADS. CAPACITORS WITHOUT VALUE NOTED ARE .01MFD.
 2. RESISTORS MARKED WITH ASTERISK ARE NOT USED.
 3. LOCATIONS MARKED E1, E9, E10, E25, E27, & E42 ARE SPARES.

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|---|------------------------------|---------------|----------|
| 1 | E74 | HANDLE, MODULE | CPS-RMB21-2 | 31 |
| 1 | E74 | I.C. DEC. DM8598-AD | 23-CB3A1 | 30 |
| 8 | E87, E88, E89, E90 | I.C. DEC. 3101A | 1910 653 | 29 |
| 4 | E3, E4, E6, E7, E8 | I.C. DEC. 745194 | 1910552 | 28 |
| 3 | E2, E9, E59 | I.C. DEC. 745174 | 1910550 | 27 |
| 10 | E29, E30, E31, E32, E33, E34, E35, E36, E37, E38, E39 | I.C. DEC. 745158 | 1910549 | 26 |
| 4 | E23, E24, E25, E26 | I.C. DEC. 745153 | 1910547 | 25 |
| 1 | E43 | I.C. DEC. 745112 | 1910545 | 24 |
| 2 | E50, E79 | I.C. DEC. 745174 | 1910544 | 23 |
| 11 | E56, E57, E58, E59, E60, E61, E62, E63, E64, E65, E66, E67, E68 | I.C. DEC. 745164 | 1910542 | 22 |
| 3 | E6, E7, E8 | I.C. DEC. 745164 | 1910539 | 21 |
| 7 | E8, E9, E10, E11, E12, E13, E14, E15, E16, E17, E18 | I.C. DEC. 745111 | 1910537 | 20 |
| 5 | E2, E3, E4, E5, E6, E7, E8, E9 | I.C. DEC. 745108 | 1910536 | 19 |
| 5 | E11, E12, E13, E14, E15, E16, E17 | I.C. DEC. 745105 | 1910535 | 18 |
| 10 | E7, E8, E9, E10, E11, E12, E13, E14, E15, E16, E17, E18, E19, E20 | I.C. DEC. 745104 | 1910534 | 17 |
| 5 | E9, E10, E11, E12, E13 | I.C. DEC. 745102 | 1910532 | 16 |
| 2 | E13, E14 | I.C. DEC. 745101 | 1910096 | 15 |
| 1 | E87 | I.C. DEC. 745100 | 1909060 | 14 |
| 2 | E55, E72 | I.C. DEC. 745100 | 1909059 | 13 |
| 2 | R70, R72 | RES. 750Ω, 1/4W, 5% | 1301401 | 12 |
| 30 | R71, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96 | RES. 680Ω, 1/4W, 5% | 1301424 | 11 |
| 4 | R8, R10, R12, R14 | RES. 500Ω, 1/4W, 5% | 1301890 | 10 |
| 7 | R2, R4, R6, R8, R10, R12, R14, R16 | RES. 150Ω, 1/4W, 5% | 1300250 | 9 |
| 38 | R7, R9, R11, R13, R15, R17, R19, R21, R23, R25, R27, R29, R31, R33, R35, R37, R39, R41, R43, R45, R47, R49, R51, R53, R55, R57, R59, R61, R63, R65, R67, R69, R71, R73, R75, R77, R79, R81, R83, R85, R87, R89, R91, R93, R95, R97, R99 | RES. 330Ω, 1/4W, 5% | 1300295 | 8 |
| 84 | C28, C31, C34, C36, C38, C41, C43, C45, C47 | CAP. 0.01μF, 100V, 20% D5C | 1001610 | 7 |
| 6 | C91-C96 | CAP. 0.01μF, 25V, 20% 5 TANT | 1000067 | 6 |
| 1 | | ETCHED CIRCUIT BOARD | 5007807 | 5 |
| REF | | MODULE ECO HISTORY | B-MW-MBBI-B-4 | 4 |
| REF | | ASSY/DRILLING HOLE LAYOUT | E-MW-MBBI-B-5 | 3 |
| REF | | X-COORDINATE HOLE LOCATION | K-CO-MBBI-B-4 | 2 |
| 12 | | EYELET | 9006732 | 1 |

| JEC | DM8598-AD | QTY | 16 |
|-----|-----------|-----|----|
| DEC | 3101A | 8 | 16 |
| DEC | 745174 | 4 | 16 |
| DEC | 745158 | 4 | 16 |
| DEC | 745153 | 4 | 16 |
| DEC | 745104 | 8 | 16 |
| DEC | 745102 | 4 | 16 |
| DEC | 745101 | 2 | 16 |
| DEC | 745100 | 2 | 16 |



ETCH BOARD REV B

CHANGES:

| REV | DATE | DESCRIPTION |
|-----|----------|----------------|
| 1 | 11/10/71 | INITIAL DESIGN |
| 2 | 11/10/71 | REVISION |
| 3 | 11/10/71 | REVISION |
| 4 | 11/10/71 | REVISION |
| 5 | 11/10/71 | REVISION |
| 6 | 11/10/71 | REVISION |
| 7 | 11/10/71 | REVISION |
| 8 | 11/10/71 | REVISION |
| 9 | 11/10/71 | REVISION |
| 10 | 11/10/71 | REVISION |
| 11 | 11/10/71 | REVISION |
| 12 | 11/10/71 | REVISION |

SEMICONDUCTOR CONVERSION CHART

SCALE 2/1

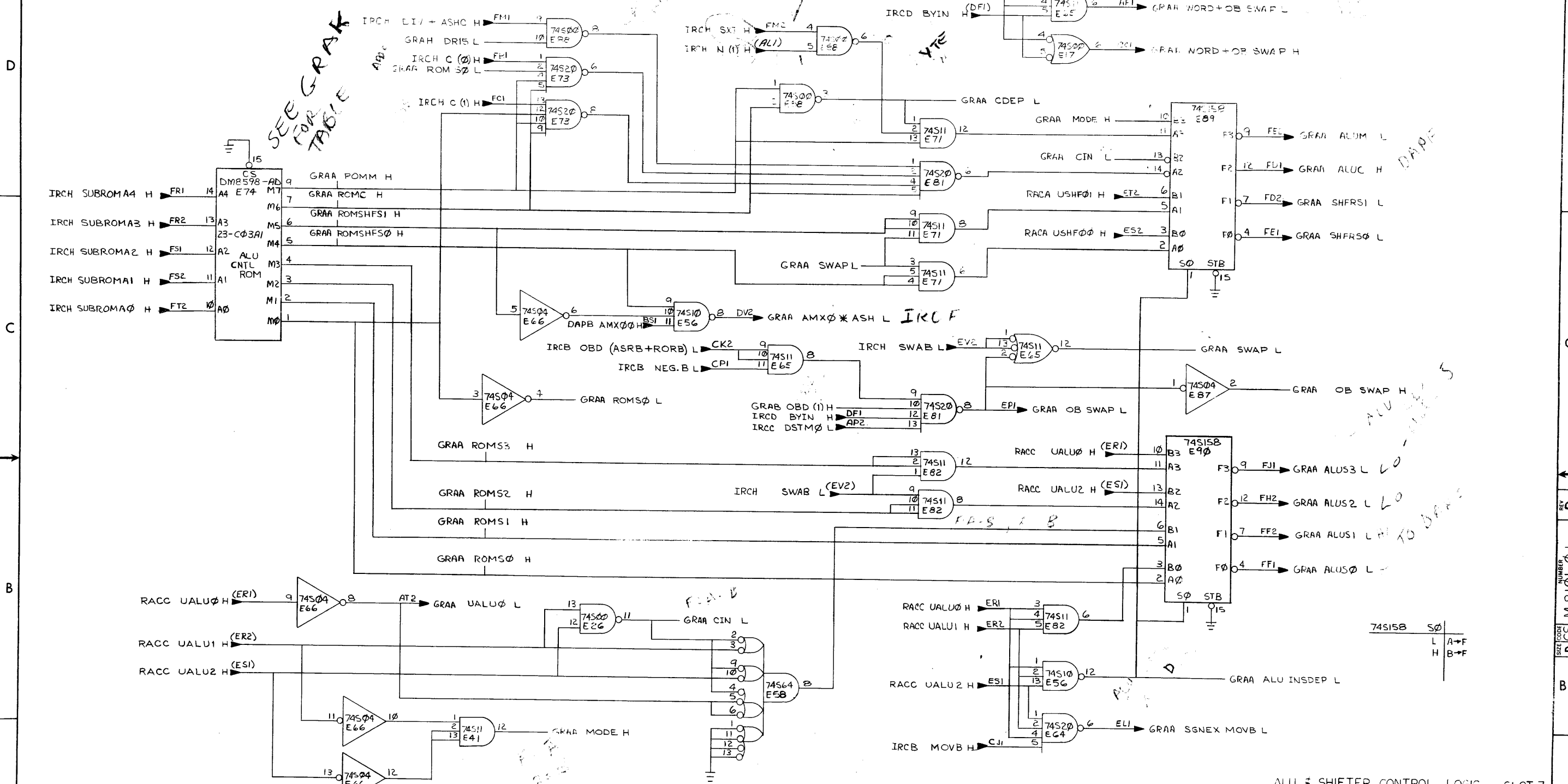
SHEET 1 OF 10

GENERAL REGS. & ALU. CNTL.

1971

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Q 1-7-1018 N SC 2



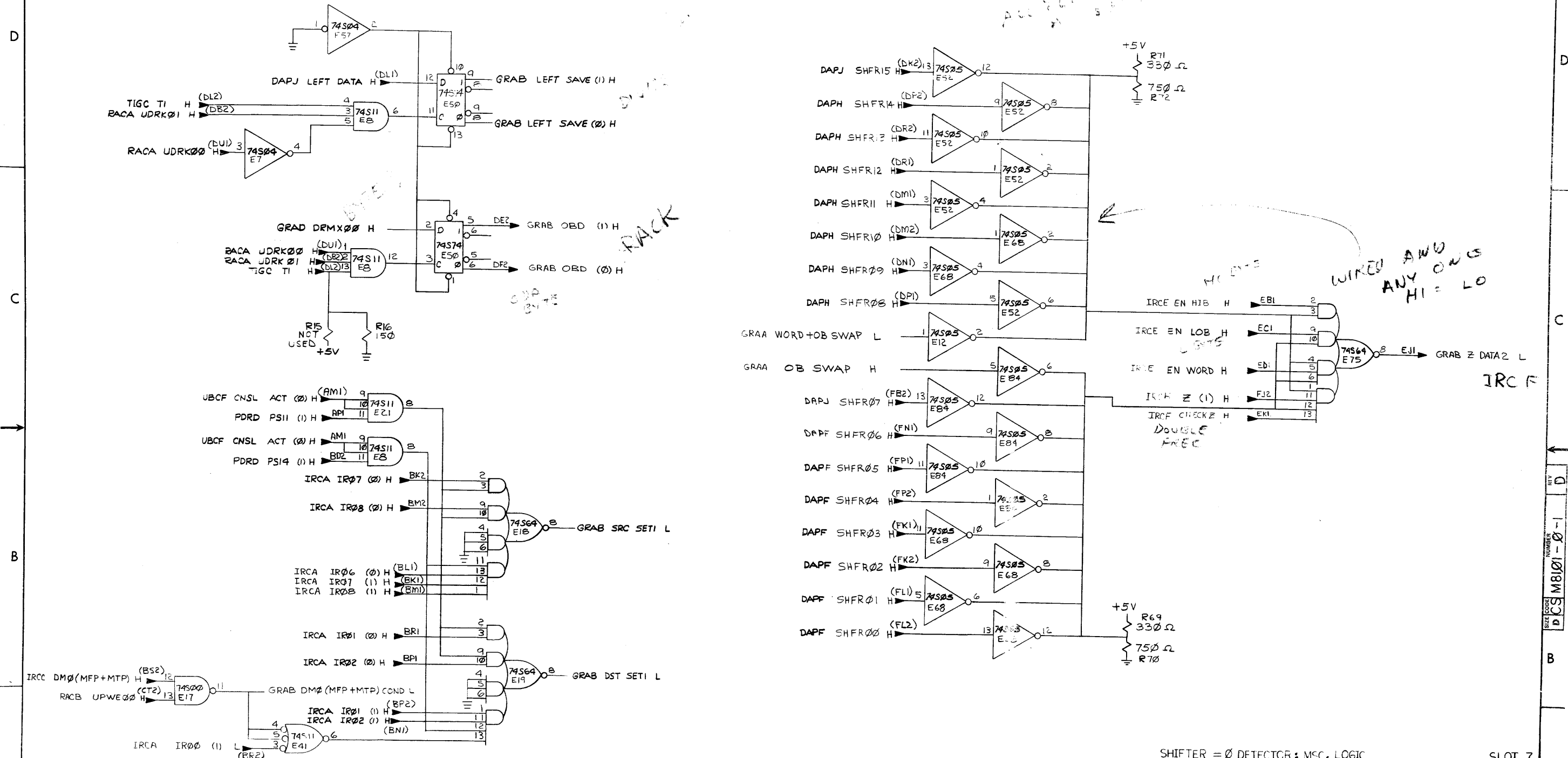
| | |
|-----------|-----|
| REVISIONS | REV |
| CHANGE NO | |
| CHK | |

| FIRST USED ON OPTION/MODEL | | | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--|-------------------|------|-------------------------------|-------------|----------|----------|
| 11/45 | | | | | | | |
| PARTS LIST | | | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN | DATE | digital EQUIPMENT CORPORATION | | | |
| DECIMALS .XXX = .005 | | CHK'D | DATE | MAYNARD MASSACHUSETTS | | | |
| ANGLES ±0° 30' | | ENG | DATE | TITLE | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. ENG. | DATE | GENERAL REGS | | | |
| MATERIAL | | PROD. | DATE | ALU CNTL (GRAA) | | | |
| FINISH | | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER | REV | |
| | | B-DD-KEL-0 | | DCS | 11-101-0-1 | D | |
| | | SCALE | | SHEET | 2 | OF | 10 |
| | | DIST. | | | | | |

REV D
NUMBER M8101-0-1
SIZE CODE DCS

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1-0-1018W S0 a 2
938WNN 30033ZIS



BACK

WIRED AND ANY ONES HI = LO

H0 D13

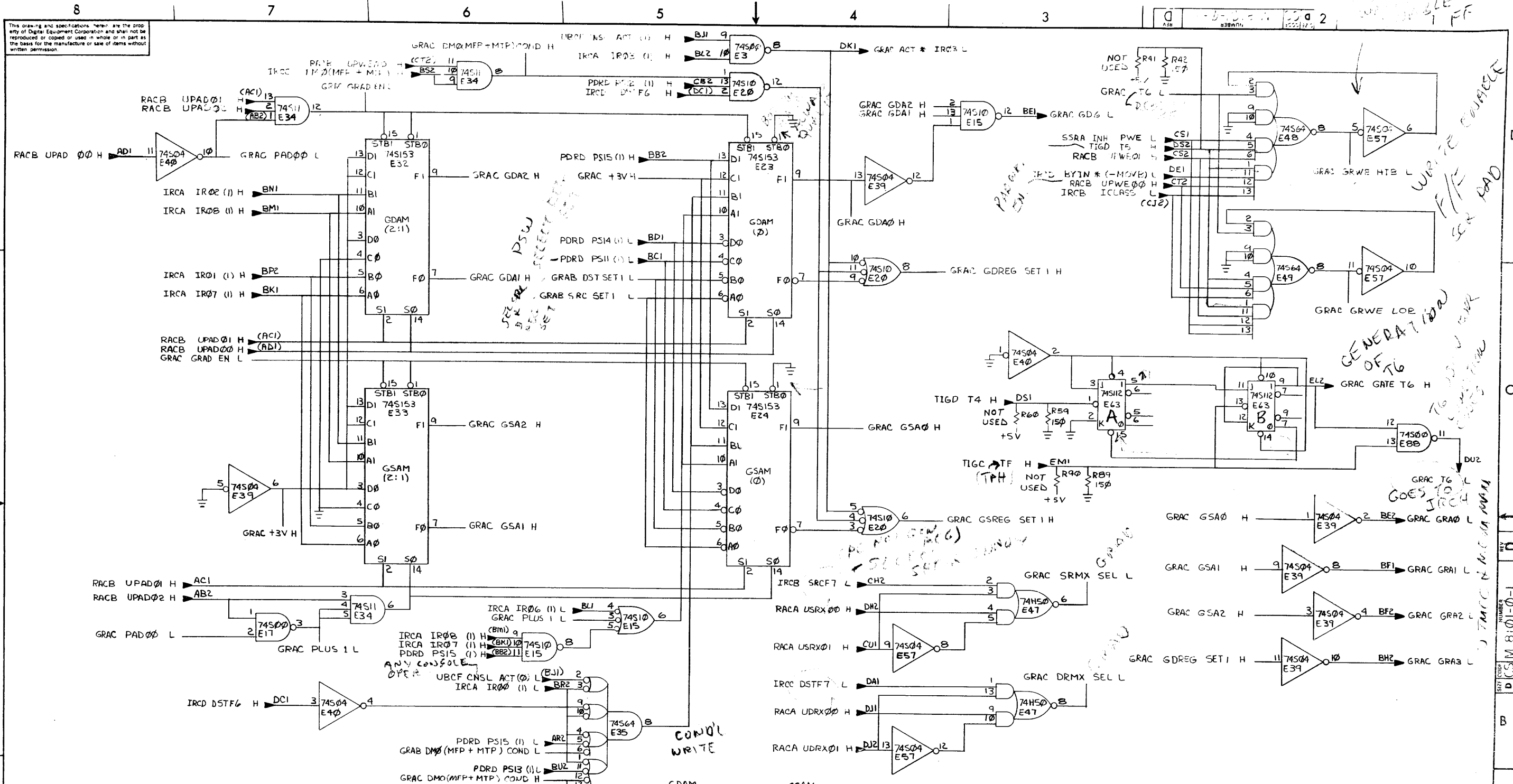
SHIFTER = 0 DETECTOR; MSC. LOGIC SLOT 7

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|-----------|-------------------------------|----------|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | TITLE | | |
| .XXX = .005 | .XX = .02 | GENERAL REGS. | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| FINISH | | | | |
| NEXT HIGHER ASSY. | | | | |
| SCALE | | | | |
| SHEET 3 OF 12 | | | | |
| PARTS LIST | | DIGITAL EQUIPMENT CORPORATION | | |
| DATE 7-15-71 | | MAYNARD MASSACHUSETTS | | |
| DATE 8/19/71 | | TITLE | | |
| DATE 9/17/71 | | GENERAL REGS. | | |
| DATE 7-15-71 | | #ALU CNTL | | |
| SIZE CODE | | NUMBER (GRAB) | | |
| DCS M8101-0-1 | | REV D | | |
| DIST. | | | | |

| | |
|------------|-----|
| REVISION: | REV |
| CHANGE NO. | |
| CHK | |

SIZE CODE DCS M8101-0-1 REV D

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| GDAM | | | | GSAM | | | | UPWE 01 00 | | | | GRWE LOB | | | | GRWE HIB | | | |
|------|----|----|-------------|------|----|----|-------------|------------|----|-------------|----|----------|------------------------|----|----|------------------------|--|--|--|
| UPAD | SI | S0 | ADDR OUTPUT | UPAD | SI | S0 | ADDR OUTPUT | 01 | 00 | WRITE COND: | 01 | 00 | WRITE COND: | 01 | 00 | WRITE COND: | | | |
| 0+1 | L | L | SF | 0+1 | L | L | SF | L | L | DON'T WRITE | L | L | DON'T WRITE | L | L | DON'T WRITE | | | |
| 4 | L | L | SFV1 | 4 | L | L | SFV1 | L | H | WRITE COND: | L | H | WRITE COND: | L | H | WRITE COND: | | | |
| 1+5 | L | L | DF | 5 | L | H | DF | H | L | I CLASS | H | L | I CLASS + BYTE INST | H | L | I CLASS + BYTE INST | | | |
| 2 | H | L | 5 | 2+3 | H | L | 5 | H | L | WRITE | H | L | +MOVX (SIGN EXTEN. ED) | H | L | +MOVX (SIGN EXTEN. ED) | | | |
| 3+7 | H | H | 6 | 7 | H | H | 6 | H | H | NOT USED | H | H | WRITE | H | H | NOT USED | | | |

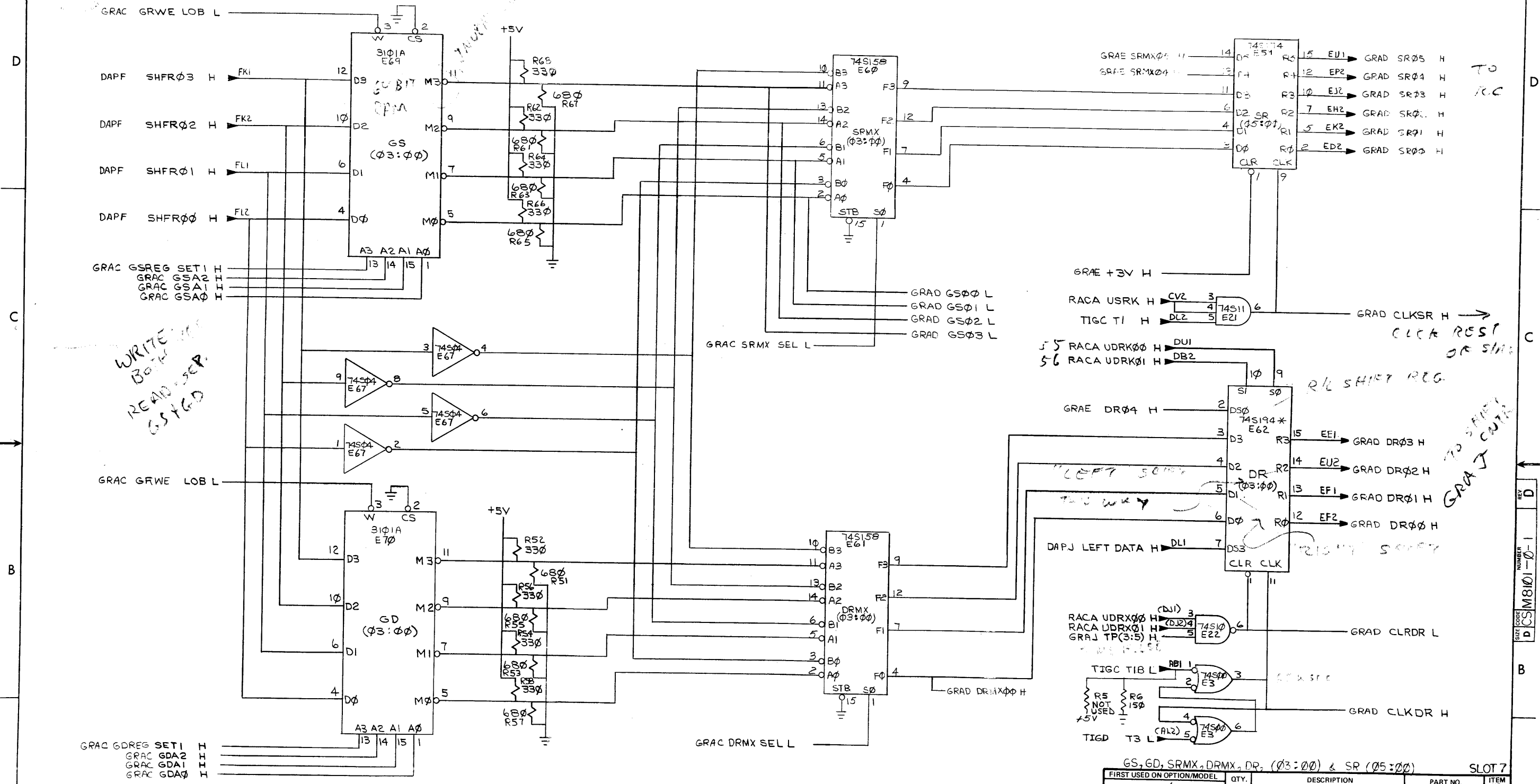
| GENERAL REGS ADDR & WRITE PULSE CNTL | | | | SLOT 7 | |
|--|---------|-------------|-------------------|-------------------------|--|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. | |
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | |
| DECIMALS | ANGLES | ENG. | DATE | TITLE | |
| .XXX - .005 | ±0° 30' | CHW | 12/16/71 | GENERAL REGS & ALU CNTL | |
| XX - .02 | | PROJ. ENG. | 2/2/72 | (GRAC) | |
| X - .1 | | PRD. | 2/2/72 | NUMBER | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | NEXT HIGHER ASSY. | | |
| MATERIAL | | | SIZE CODE | | |
| FINISH | | | SCALE | | |
| | | | SHEET 4 OF 10 | | |
| | | | DIST. | | |

BRUNING 40-522 15840
 REVISIONS
 REV. NO. _____
 CHANGE NO. _____
 CHK. _____
 DFC FORM NO. DRD 102-B

DCS M 8101-0-1
 REV. NO. _____
 SHEET 4 OF 10

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1-0-101-W 2 1



WRITE TO BOARD
READ 504
GS460

R/L SHIFT REG
TO SHIFT GRA 2 CNTS

NOTE: EARLY MACHINES HAVE 74194

| | | | | | |
|--------|----|-------------------|--------|----|--------|
| 74S194 | 31 | SQ | 74S158 | SQ | OUTPUT |
| L | L | NO-OP | H | H | 0 → 1 |
| I | H | SHIFT RIGHT (DSQ) | H | H | 0 → 1 |
| H | L | SHIFT LEFT (DSQ) | H | H | 0 → 1 |
| H | H | LOAD | H | H | 0 → 1 |

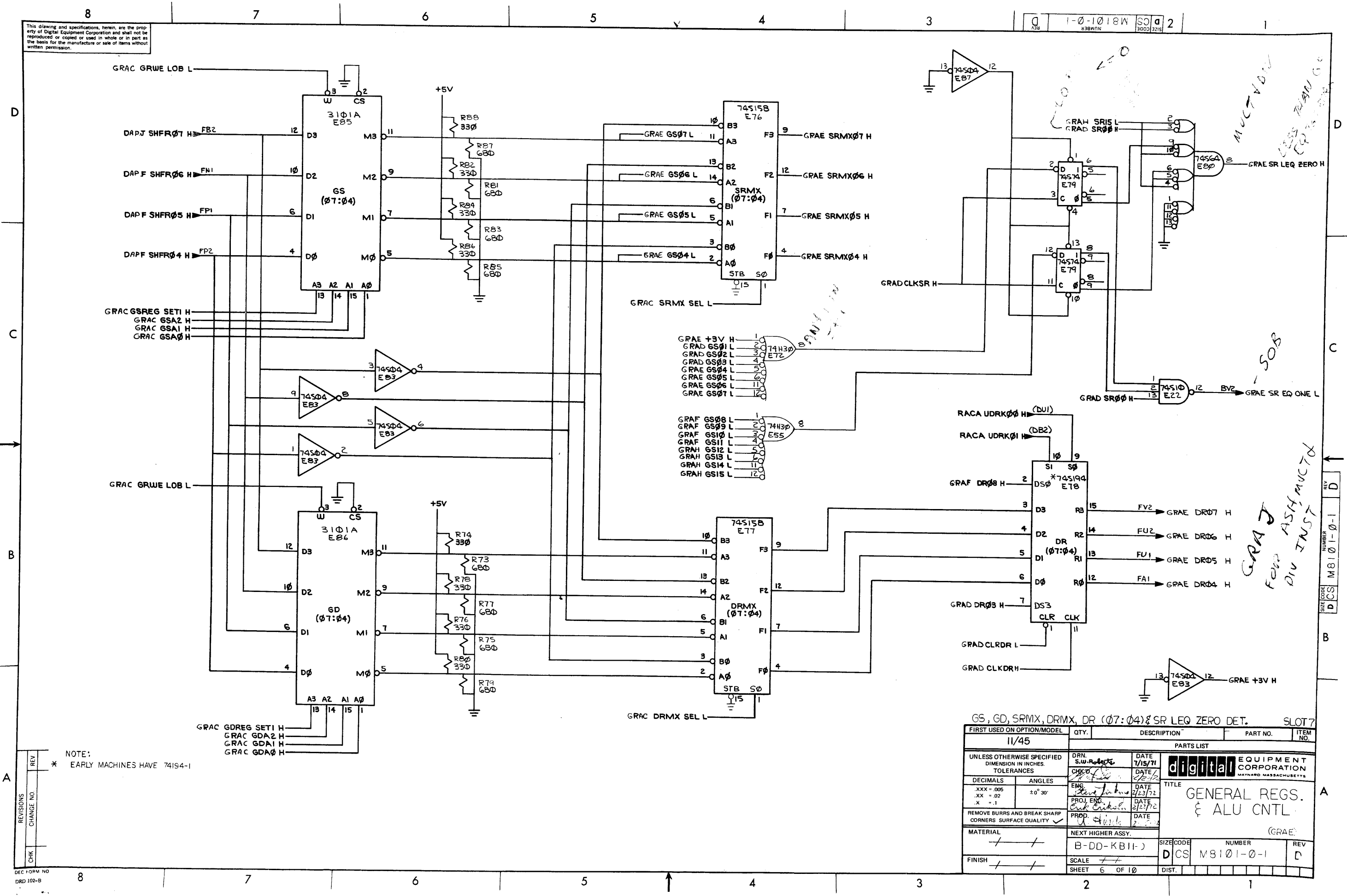
| | | | | | |
|--|-----------|-------------------|-------------|-------------------------------|-------------|
| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | |
| DECIMALS | ANGLES | PARTS LIST | | | |
| .XXX = .005 | .XX = .02 | DRN | DATE | digital EQUIPMENT CORPORATION | |
| .X = .1 | ±0°30' | CHKD | DATE | MAYNARD MASSACHUSETTS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | ENG. | DATE | TITLE | |
| | | PROJ. ENG. | DATE | GENERAL REGS. & ALU. CNTL | |
| | | PROB. | DATE | CORNERS SURFACE QUALITY | |
| MATERIAL | | NEXT HIGHER ASSY. | | | |
| FINISH | | SCALE | | SIZE CODE | NUMBER |
| | | SHEET 5 OF 10 | | D | CSM8101-0-1 |
| | | | | DIST | REV. D |

| | |
|-----|----------------|
| REV | DESCRIPTION |
| 1 | INITIAL DESIGN |
| 2 | REVISED |
| 3 | REVISED |
| 4 | REVISED |
| 5 | REVISED |
| 6 | REVISED |
| 7 | REVISED |
| 8 | REVISED |
| 9 | REVISED |
| 10 | REVISED |

ORD 102-B

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1-0-1018W SC 2

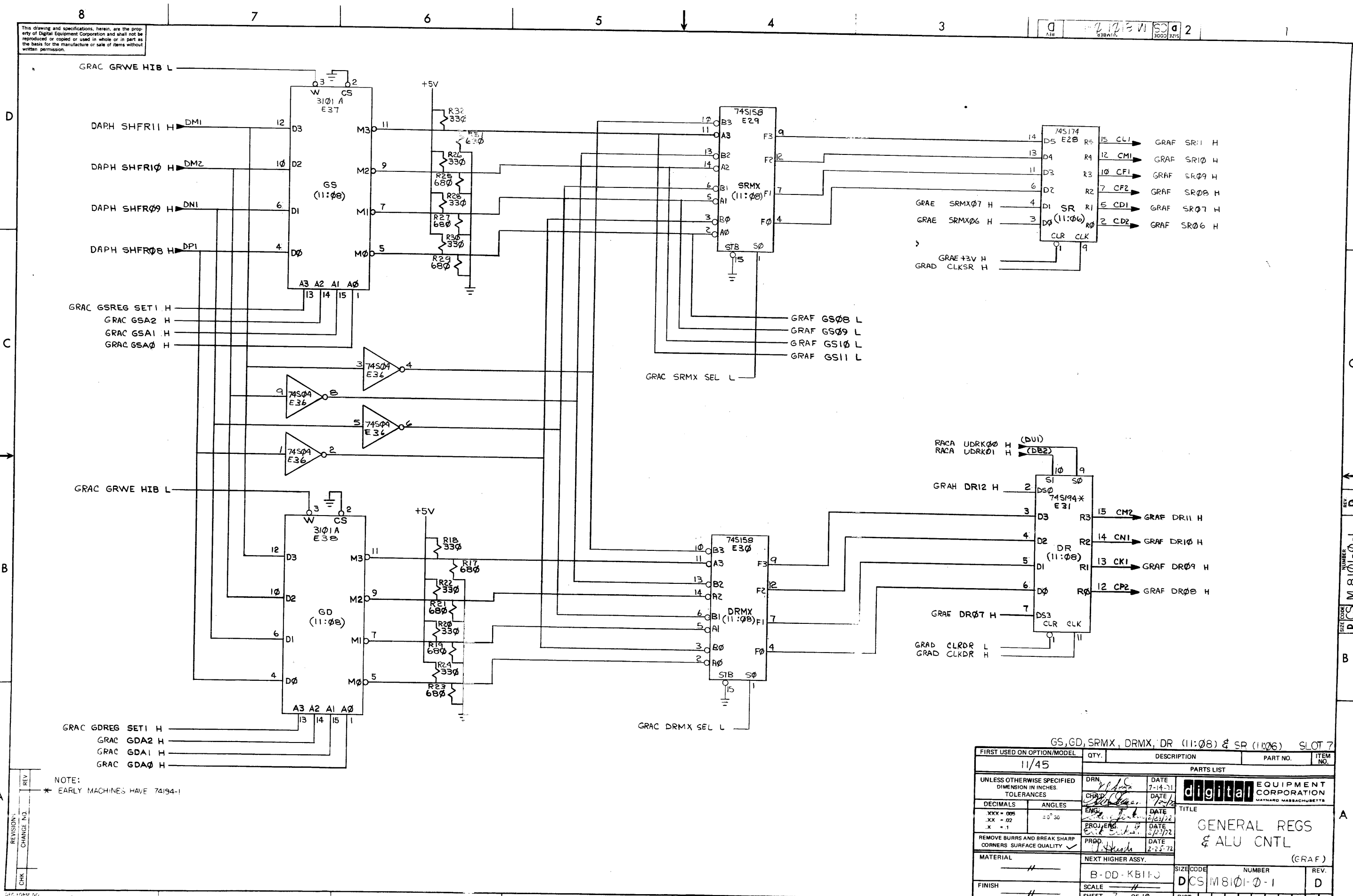


| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------------------|--------------|--|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. S.W. Roberts | DATE 7/15/71 | digital EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small> |
| DECIMALS ANGLES | | CHK'D | DATE | |
| .XXX = .005 | ±0° 30' | ENG. Steve Johnson | DATE 2/13/72 | GENERAL REGS. & ALU CNTL. <small>(GRAE)</small> |
| .XX = .02 | | PROJ. ENG. Erik Erikson | DATE 2/17/72 | |
| .X = .1 | | PROD. U. H. H. H. | DATE 2/22/72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | B-DD-KB11-J | | D CS | M8101-0-1 |
| SCALE | | SHEET 6 OF 10 | | REV D |

NOTE: * EARLY MACHINES HAVE 74194-1

| REV | CHANGE NO. |
|-----|------------|
| | |
| | |

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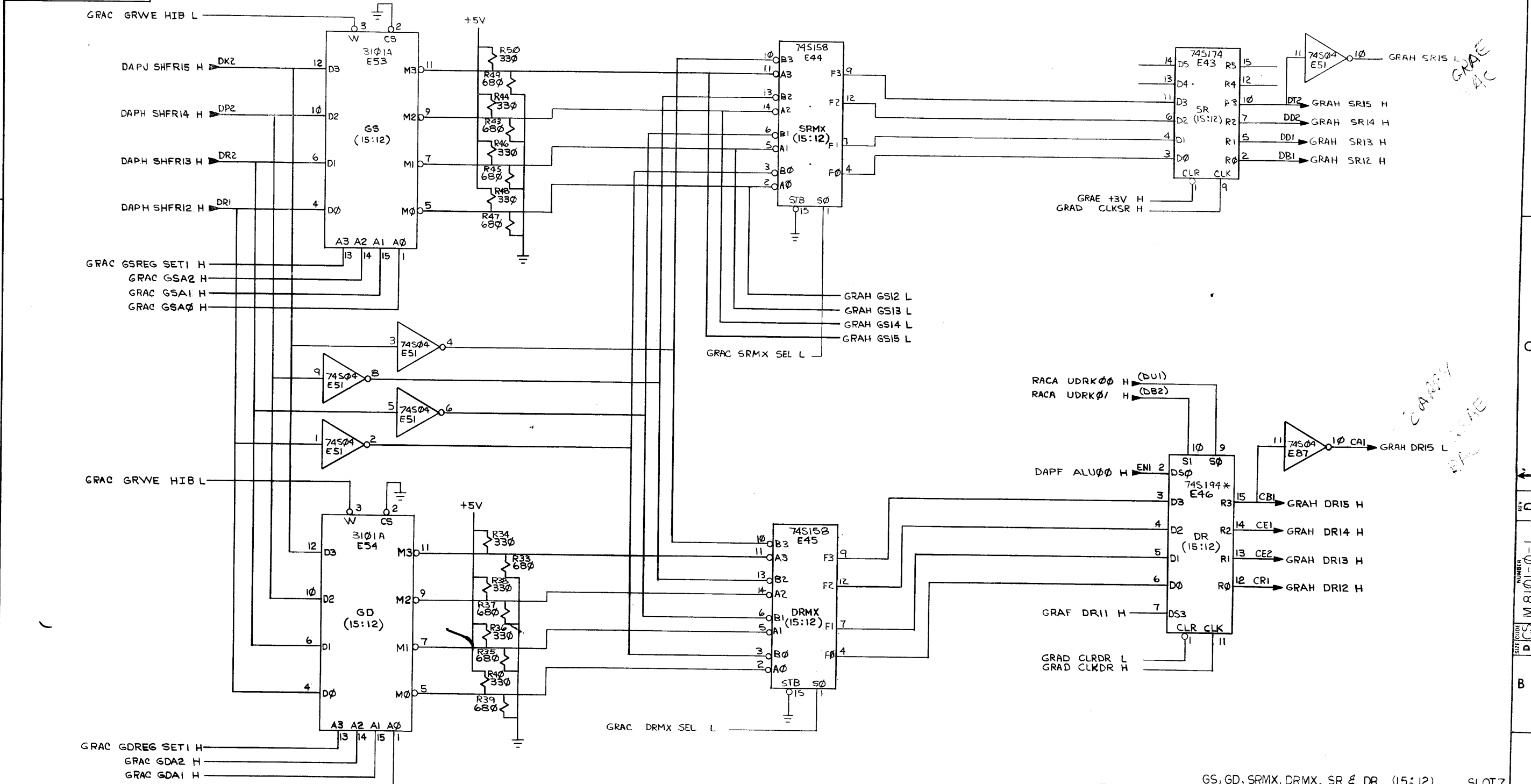


NOTE:
* EARLY MACHINES HAVE 74194-1

| | | |
|-----|-----|-----|
| REV | CHG | NO. |
| | | |
| | | |
| | | |

| | | | | | |
|---|-----------|-------------------------------|-------------|----------|----------|
| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | | |
| DECIMALS | ANGLES | DRN | | | |
| .XXX = .005 | .XX = .02 | DATE 7-14-71 | | | |
| .X = .1 | .0 = .30 | DATE 7-14-71 | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | |
| MATERIAL | | | | | |
| NEXT HIGHER ASSY. | | | | | |
| FINISH | | | | | |
| SCALE | | | | | |
| SHEET 7 OF 10 | | | | | |
| TITLE | | PARTS LIST | | | |
| GENERAL REGS & ALU CNTL (GRAF) | | digital EQUIPMENT CORPORATION | | | |
| SIZE CODE | | NUMBER | | REV. | |
| DCS M8101-0-1 | | D | | D | |

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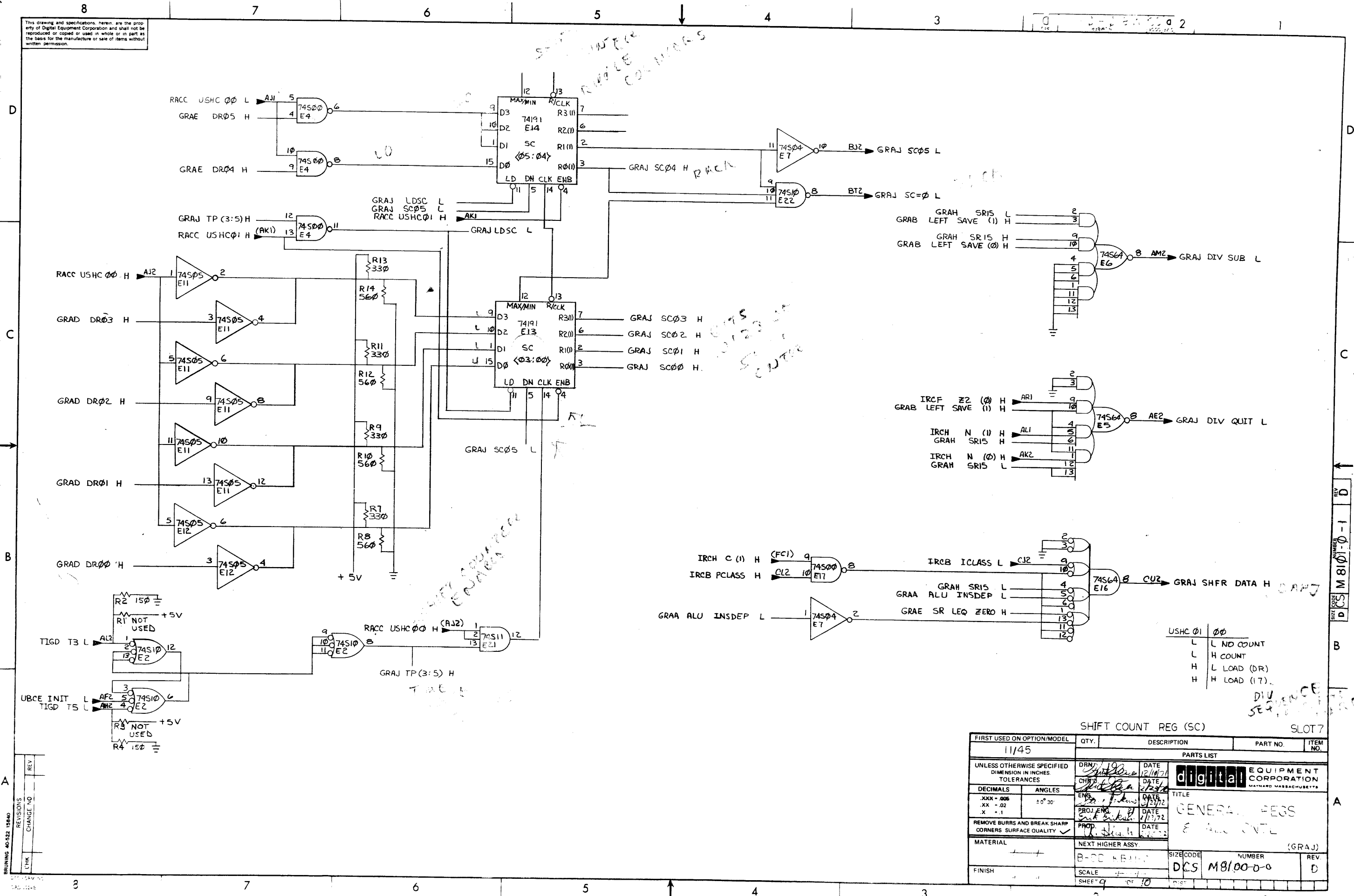


NOTE: * EARLY MACHINES HAVE 74194-1.

| REV | CHG | NO |
|-----|-----|----|
| | | |

| | | | | | |
|--|---------|---|-------------|-----------|---------------|
| FIRST USED ON OPTION/MODEL 11/45 | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | |
| DECIMALS | ANGLES | PARTS LIST | | | |
| .XXX = .005 | ±0° 30' | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | | |
| .XX = .02 | | TITLE GENERAL REGS & ALU CNTL (GRAH) | | | |
| .X = .1 | | MATERIAL | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY | | NEXT HIGHER ASSY. | | | |
| FINISH | | SCALE | | SIZE CODE | NUMBER |
| SHEET 5 OF 10 | | B-DD-KB11-J | | D | CS M 8101-0-1 |
| | | DIST. | | REV | D |

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| REV | CHANGE NO |
|-----|-----------|
| | |
| | |

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--|-------------------|----------------|--------------------------------|-------------------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN: 119 | DATE: 12/11/71 | digital EQUIPMENT CORPORATION | |
| DECIMALS ANGLES | | CHK: 119 | DATE: 1/23/72 | MAYNARD MASSACHUSETTS | |
| .XXX = .005 .XX = .02 .X = .1 | | ENS: 119 | DATE: 1/23/72 | TITLE: GENERAL REGS & ALL INTR | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. ENG: 119 | DATE: 1/23/72 | | |
| MATERIAL | | PROD: 119 | DATE: 1/23/72 | | |
| FINISH | | NEXT HIGHER ASSY: | | (GRAJ) | |
| | | B-DC | SCALE: 10 | SIZE CODE: DCS | NUMBER: M8100-0-0 |
| | | SHEET: 9 | OF: 10 | REV: D | |

REV D
M8100-0-1

This drawing and specifications, herein, are the property of Digital Equipment Corporation and shall not be reproduced or copied or used in whole or in part as the basis for the manufacture or sale of items without written permission.

| INSTRUCTION | OCTAL ADDRESS |
|-------------|---------------|
| ROR.B | 00 |
| ROL.B | 01 |
| ASR.B | 02 |
| ASL.B | 03 |
| MARK | 04 |
| MFP | 05 |
| MTP | 06 |
| SXT | 07 |
| CLR.B | 10 |
| COM.B | 11 |
| INC.B | 12 |
| DEC.B | 13 |
| NEG.B | 14 |
| ADC.B | 15 |
| SBC.B | 16 |
| TST.B | 17 |
| SUB | 20 |
| MOV.B | 21 |
| CMP.B | 22 |
| BIT.B | 23 |
| BIC.B | 24 |
| BIS.B | 25 |
| ADD | 26 |
| | 27 |
| MUL | 30 |
| DIV | 31 |
| ASH | 32 |
| ASHC | 33 |
| XOR | 34 |
| | 35 |
| | 36 |
| SOB | 37 |

| ALU CNTL ROM DM8598-AD | | | | | | | |
|------------------------|------|---------|---------|-------|-------|-------|-------|
| ROMM | ROMC | ROMSHF1 | ROMSHFB | ROMS3 | ROMS2 | ROMS1 | ROMSB |
| M7 | M6 | M5 | M4 | M3 | M2 | M1 | M0 |
| L | L | H | H | L | L | L | L |
| H | H | H | L | H | H | L | L |
| L | L | H | H | L | L | L | L |
| L | L | H | L | L | H | L | L |
| L | L | L | L | L | L | L | L |
| H | L | H | L | H | L | H | L |
| H | L | H | L | L | L | H | L |
| H | L | H | L | L | L | L | L |
| L | H | H | L | L | L | L | L |
| L | L | H | L | H | H | H | H |
| L | L | H | L | L | L | L | L |
| L | H | H | L | L | L | L | L |
| H | L | H | L | L | L | H | L |
| H | L | H | L | L | L | H | H |
| H | L | H | L | L | H | H | L |
| L | L | H | L | H | L | L | H |
| L | L | L | L | L | L | L | L |
| L | H | H | H | L | H | H | L |
| L | H | H | L | L | L | L | L |
| L | H | H | L | L | L | L | L |
| L | L | L | L | L | L | L | L |
| L | L | L | L | L | L | L | L |
| L | L | L | L | L | L | L | L |
| L | L | L | L | L | L | L | L |
| L | L | L | L | L | L | L | L |

SWAB

| INSTRUCTION DEP. ALU FUNCTION (RACC UALU (2:0)=7) |
|---|
| F=A |
| F=A PLUS A PLUS CBIT |
| F=A |
| F=A PLUS A |
| NOT INST. DEP. |
| F=B |
| F=B |
| N: F=MINUS I ; N: F=B |
| F=B |
| F=A |
| F=A PLUS I |
| F=A MINUS I |
| F=A |
| F=A PLUS C BIT |
| F=A MINUS C BIT |
| F=A |
| F=A MINUS B |
| F=B |
| F=A MINUS B MINUS I |
| F=AB |
| F=AB |
| F=A+B |
| F=A PLUS B |
| F=A MINUS B |
| F=A PLUS A PLUS DR15 |
| NOT INST. DEP. |
| F=A PLUS A PLUS DR15 |
| F=A * B |
| NOT INST. DEP. |
| F=A |

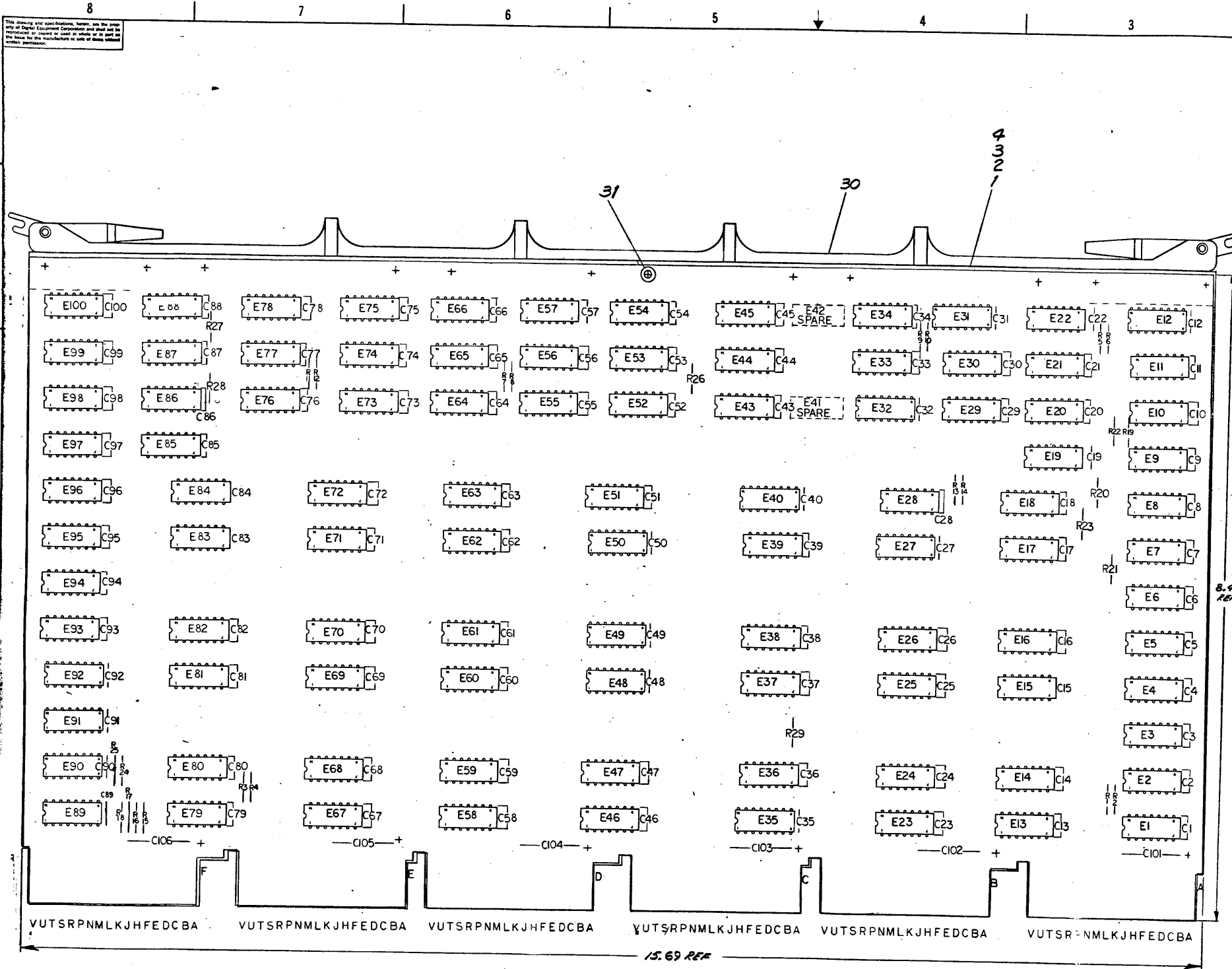
| INSTRUCTION DEP. SHFR FUNCTION (RACC UALU (2:0)=7) |
|--|
| RIGHT SHIFT |
| NO - SHIFT ** |
| RIGHT SHIFT |
| NO - SHIFT ** |
| NOT INST. DEP. |
| NO - SHIFT |
| NO - SHIFT |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
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| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| NO - SHIFT ** |
| RIGHT SHIFT |
| NO - SHIFT |
| NOT INST. DEP. * |
| NO - SHIFT |
| NO - SHIFT |
| NO - SHIFT |
| NOT INST. DEP. |
| SWAP BYTES |

NOTE: SWAB INST. HAS SAME ROM ADDRESS AS ASL.B
 *ROMSHF OUTPUTS USED TO DECODE ASH
 **ODD BYTE*BYTE INSTR: SWAP BYTES

| ALU CNTL ROM MAP | | | | SLOT 7 | |
|--|-------------------|---|--------------|----------|--|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. | |
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | |
| DECIMALS | ANGLES | TITLE | | | |
| .XXX = .005 | ±0° 30' | digital EQUIPMENT CORPORATION WATUARD MASSACHUSETTS GENERAL REGS. ALU CNTL (GRAK) | | | |
| .XX = .02 | | | | | |
| .X = .1 | | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | |
| MATERIAL | NEXT HIGHER ASSY. | REV. D | | | |
| FINISH | B-DD-KB110 | SIZE CODE | NUMBER | REV. D | |
| | SCALE NONE | D | CS M8101-0-1 | | |
| | SHEET 10 OF 10 | DIST. | | | |

BRUNING 40-522 15840
 DEC FORM NO. DRD 102-B

REV. D
 NUMBER M8101-0-1
 SIZE CODE DCS



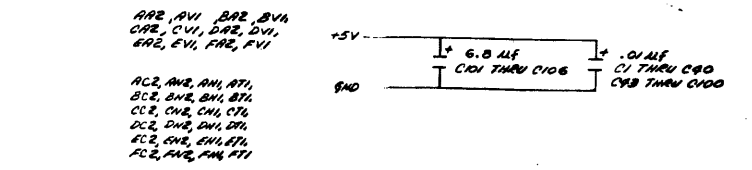
NOTES:
 1. UNLESS OTHERWISE NOTED RESISTANCE IS IN Ω AND CAPACITANCE IS IN PICOFARADS, CAPS WITHOUT VALUE NOTED ARE .01 MFD.
 2. RESISTORS R1, R12, R14 ARE NOT USED.

IC PIN LOCATIONS

| IC TYPE | GND | +5V |
|------------|-----|-----|
| LM 8528-AC | 8 | 16 |
| DM 8528-AB | 8 | 16 |
| DC 828-1 | 8 | 16 |
| DC 745153 | 8 | 16 |
| DC 745157 | 8 | 16 |

JUMPER LIST

| ITEM NO. | AWG | FROM PT | TO PT |
|----------|-----|---------|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



R12, R14, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100

PARIS LIST

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|------------------------------|-----------|----------|
| 10 | E1-E100 | ETCHED CIRCUIT BOARD | 5003206 | 1 |
| 1 | R1-R100 | MODULAR ECU HISTORY | 5003206-8 | 2 |
| 1 | R1 | RES/DRAWING HOLE CRYPOT | 5003206-5 | 3 |
| 1 | R2 | R-Y COORDINATE HOLE LOCATION | 5003206-6 | 4 |
| 1 | | | | |

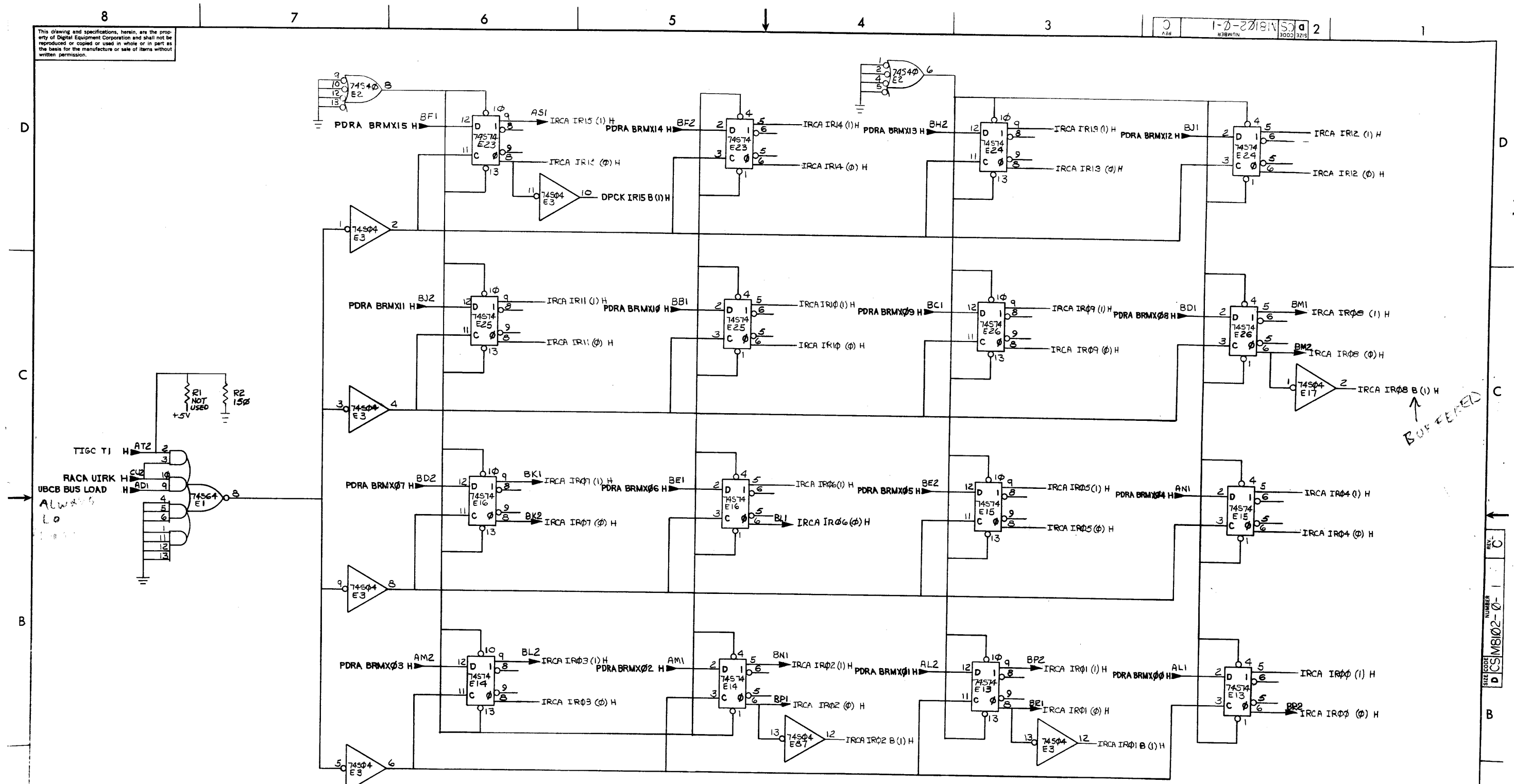
SEMICONDUCTOR CONVERSION CHART

| DEC NO. | EIA NO. | DEC NO. | EIA NO. |
|---------|---------|---------|---------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

DATE: 10/12/72
 DESIGNED BY: S. JENKINS
 CHECKED BY: B. J. HALE
 TITLE: IR DECODE #COND. CODES
 SCALE: 271
 SHEET: 1 OF 5

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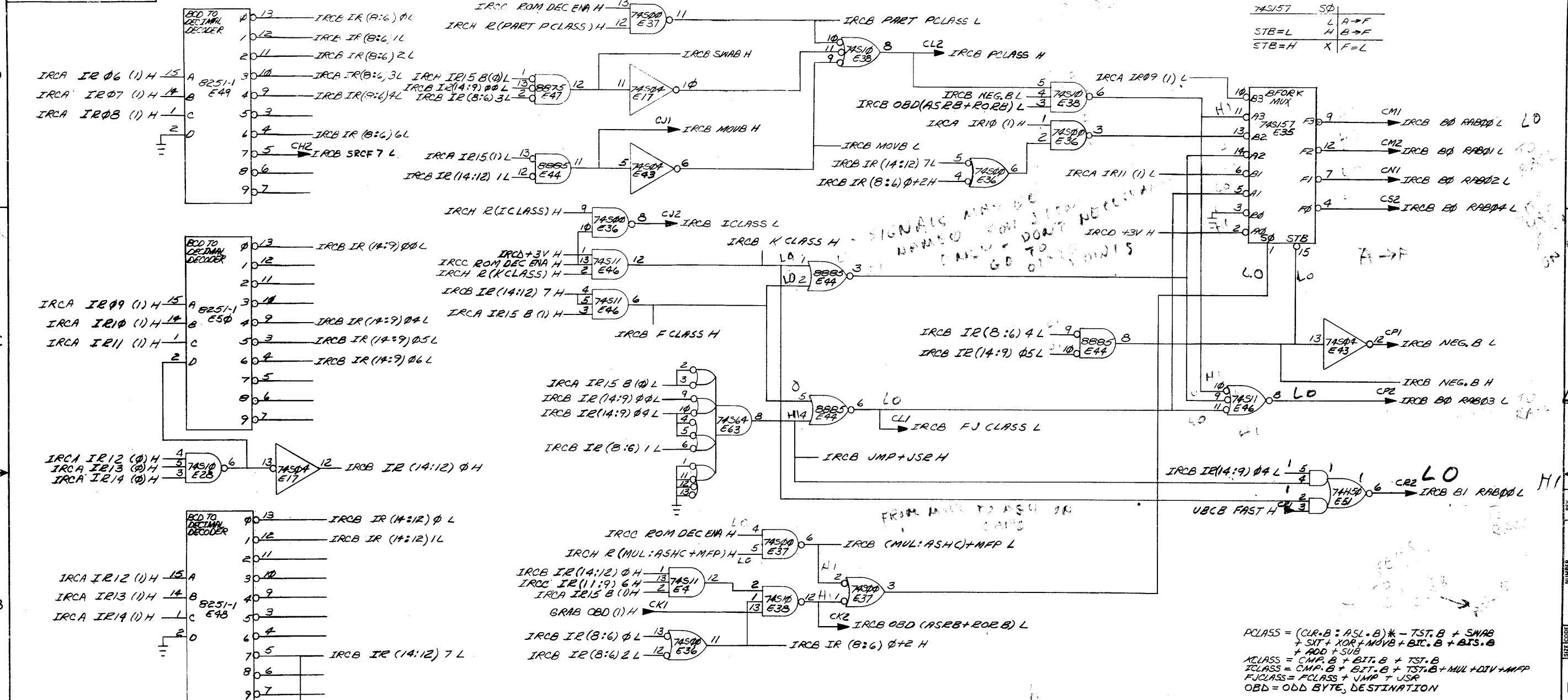
1-0-27181N CS 2



| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|------------------------|--------------|--|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. S.W. Rolata | DATE 6/24/71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE IR DECODE & COND. CODES (IRCA) | |
| DECIMALS | ANGLES | CHKD. [Signature] | DATE 2/18/72 | | |
| XXX = .005 | ±0° 30' | ENG. [Signature] | DATE 2/18/72 | | |
| XX = .02 | | PROJ. ENG. [Signature] | DATE 2/18/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | | PROD. [Signature] | DATE 2/23/72 | | |
| MATERIAL | | NEXT HIGHER ASSY. | | | |
| FINISH | | SCALE | | | |
| | | SHEET 2 OF 9 | | | |
| | | B-DD-KB11-0 | | SIZE CODE NUMBER REV. DCS M8102-0-1 C | |
| | | DIST. | | | |

SIZE CODE NUMBER REV. C
 DCS M8102-0-1

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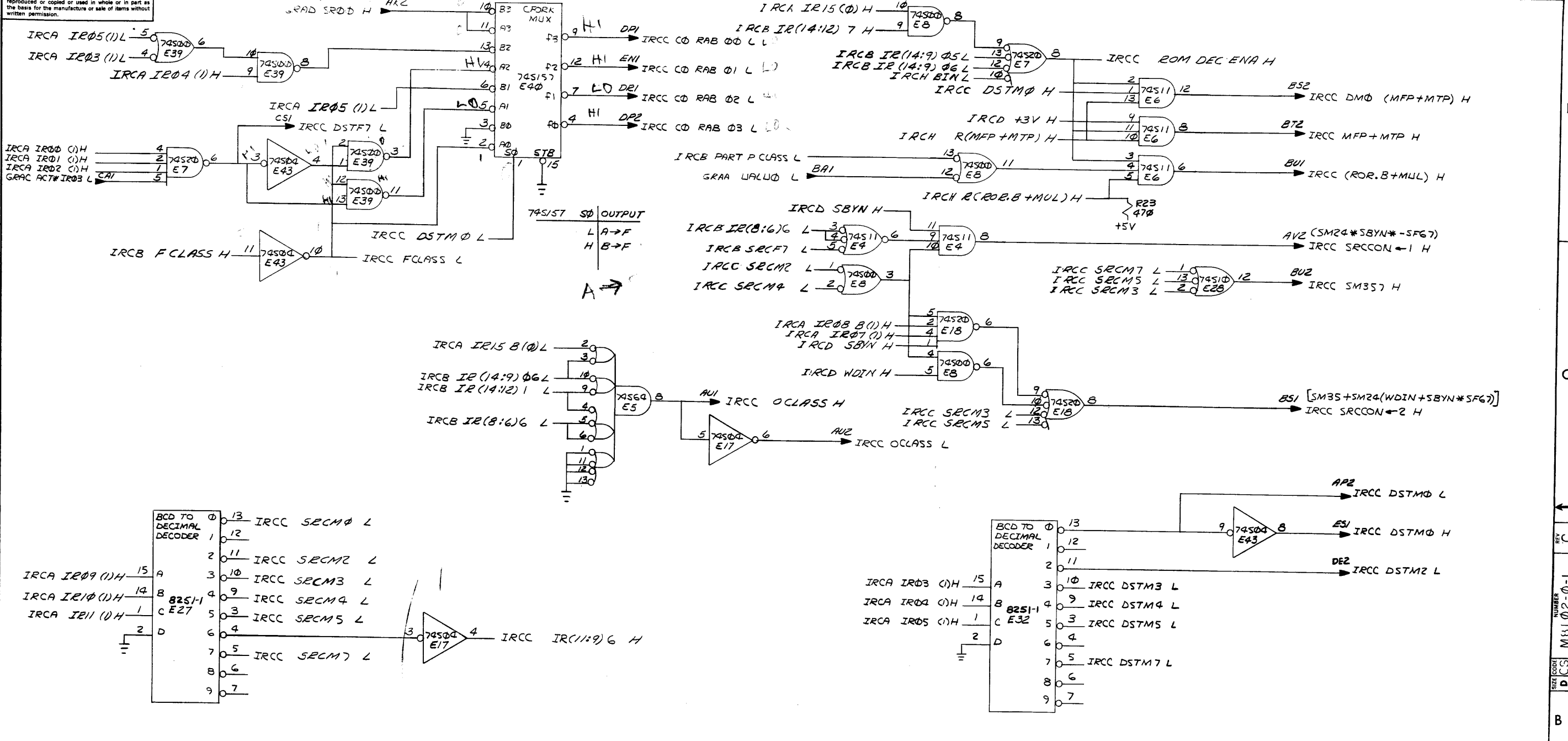
$PCLASS = (CLR.B + ASL.B) * -TST.B + SWAB + SVT + KOR + MOVH + BIC.B + BLS.B + ADD + SUB$
 $KCLASS = CMP.B + BIT.B + TST.B$
 $ICLASS = CMP.B + BIT.B + TST.B + MUL + DIV + MFP$
 $FJCLASS = FCLASS + JUMP + USE$
 OBD = ODD BYTE, DESTINATION

BFOCK; IR DECODERS SLOT 8

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|--------------------------------|-----------|----------|
| 11 45 | | PARTS LIST | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | TITLE | | |
| .XXX - .006 XX = .02 .X = .1 | ± 0° 30' | IR DECODE & COND. CODES (IRCB) | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| NEXT HIGHER ASSY. | | | | |
| FINISH | | | | |
| SCALE | | SIZE CODE | NUMBER | REV. |
| SHEET 3 OF 9 | | D CS | M8102-0-1 | C |
| DIST. | | | | |

| REV. | NO. | DESCRIPTION |
|------|-----|-------------|
| | | |

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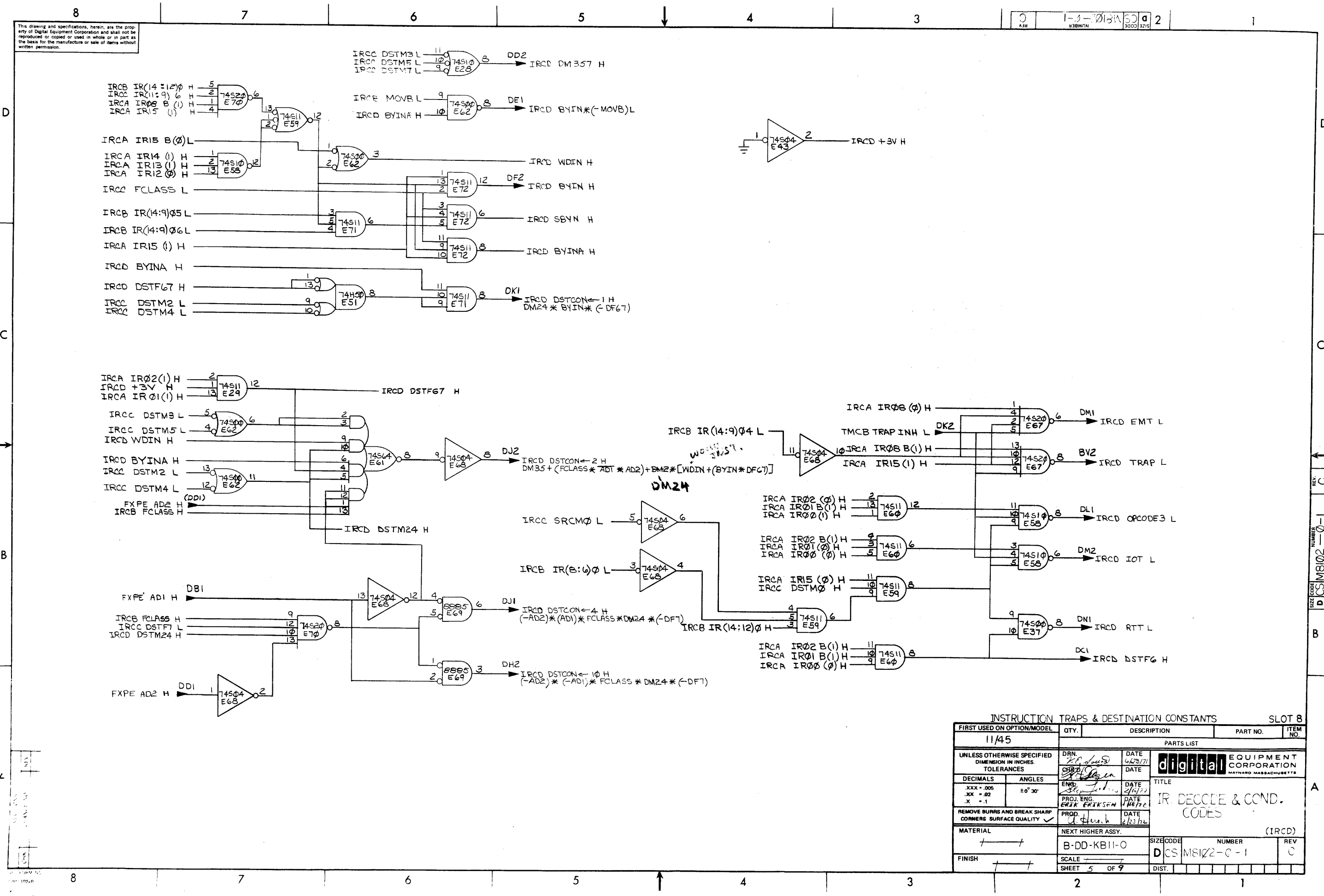


NOTE: OCLASS = MOV + MTP
 SBYN = MOV + CMP + BIT + BIC + BIS
 SR00 = OBS (ODD BYTE, SOURCE)
 FCLASS = FPU OPCODES

CFORK; IR DECODERS; SOURCE CONSTANTS SLOT 8

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------------------------------------|---|-----------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. <i>[Signature]</i> DATE 6-23-71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | |
| DECIMALS | CHKD. <i>[Signature]</i> DATE 2/11/72 | TITLE IR DECODE & COND. CODES | | |
| ANGLES | ENG. <i>[Signature]</i> DATE 2/7/72 | PROJECT ENG. ERIK FRICKEN 2/1/72 | | |
| .XXX = .005 .XX = .02 .X = .1 | PROJ. DATE 2/23/72 | PROD. <i>[Signature]</i> DATE 2/23/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
| MATERIAL | B-DD (B11-0) | D CS | M8102-0-1 | C |
| FINISH | SCALE | SHEET 4 OF 7 | DIST. | |

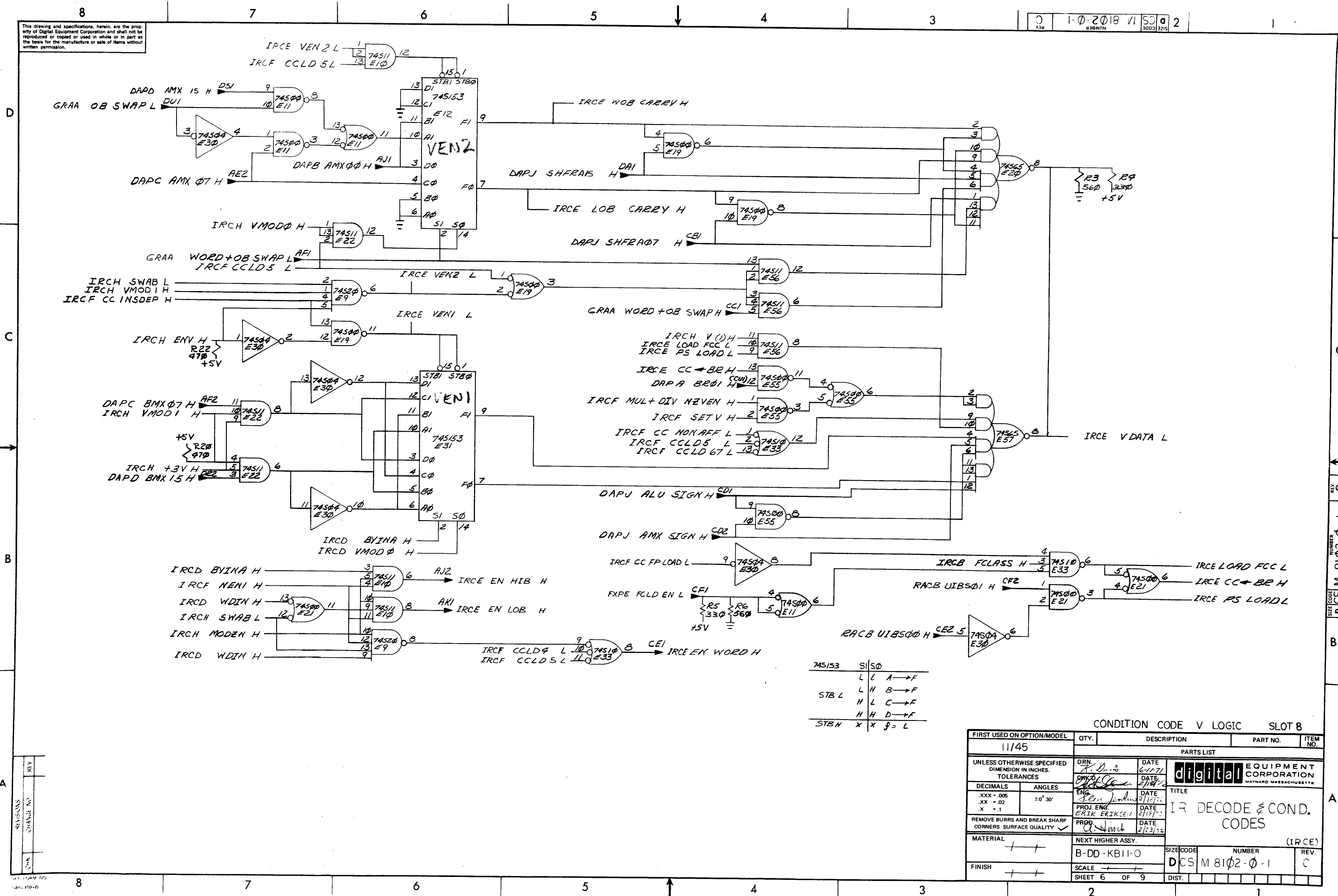
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| INSTRUCTION TRAPS & DESTINATION CONSTANTS | | | | SLOT 8 | |
|--|---------|-------------------------------|--------------|--|--------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. | |
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. <i>K.P. Dowd</i> | DATE 6/28/71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | CHKD. <i>[Signature]</i> | DATE | | |
| .XXX + .005 | 20° 30' | ENG. <i>[Signature]</i> | DATE 2/16/72 | | |
| .XX = .02 | | PROJ. ENG. <i>WAR ERIKSEN</i> | DATE 1/16/72 | | |
| .X = .1 | | PROD. <i>[Signature]</i> | DATE 2/23/72 | TITLE IR. DECODE & COND. CODES | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | (IRCD) | |
| FINISH | | B-DD-KB11-0 | | SIZE CODE | NUMBER |
| | | SCALE | | D CS M8102-C-1 | REV C |
| | | SHEET 5 OF 9 | | DIST. | |

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1-0-2018 VI SC 2



| | | |
|--------|---|---------|
| 74S153 | S | S0 |
| | L | A → F |
| STB L | L | H B → F |
| | H | L C → F |
| | H | H D → F |
| STB H | X | X f = L |

CONDITION CODE V LOGIC SLOT 8

| | | | | |
|--|----------------------------|-------------|--|---------------------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN 6-11-71 | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS .xxx = .005 .xx = .02 .x = .1 | ANGLES ±0°30' | DATE | TITLE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. ERIK ERIKSEN | DATE | IR DECODE & COND. CODES | |
| MATERIAL | NEXT HIGHER ASSY. | DATE | (IRCE) | |
| FINISH | B-DD-KB11-0 | DATE | SIZE CODE DCS M 8102-0-1 | NUMBER REV. C |
| | SCALE | DATE | SHEET 6 | OF 9 |

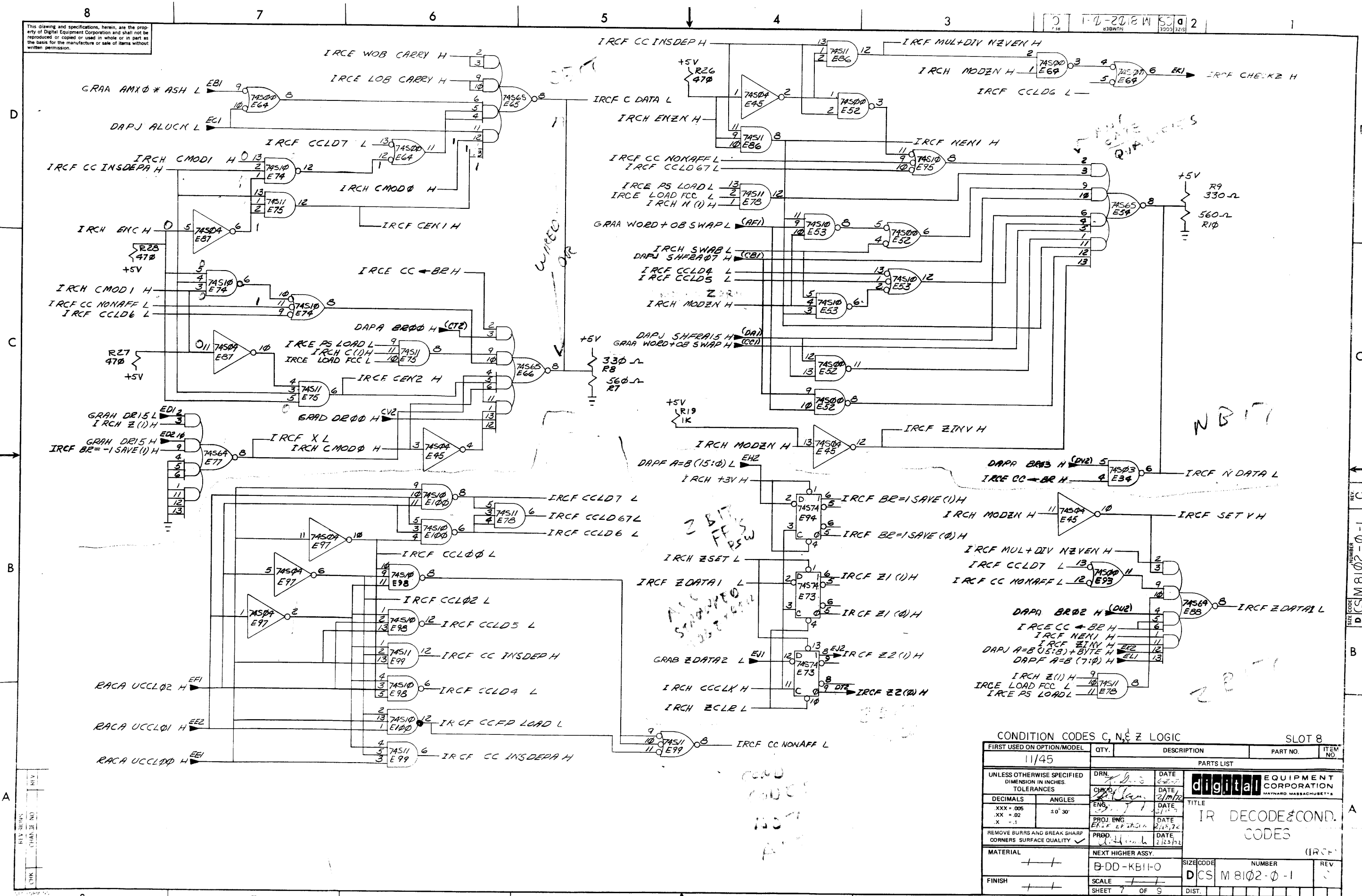
REV. C
REV. B
REV. A

REV. C

REV. C

REV. C

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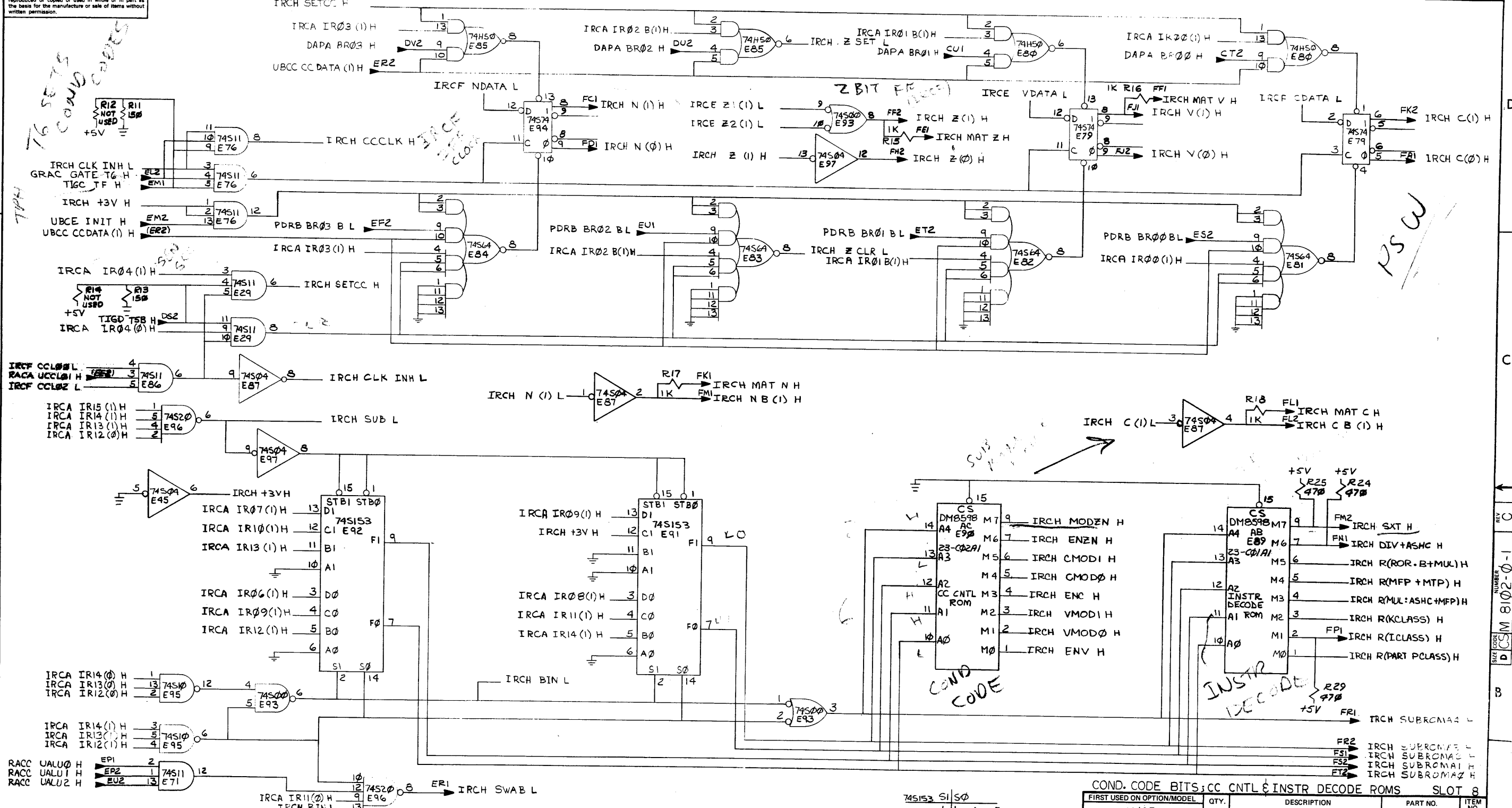
| CONDITION CODES C, N, Z LOGIC | | SLOT 8 | |
|--|-------------------|-------------------------------|--------------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. |
| 11/45 | | | |
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. <i>[Signature]</i> | DATE 6-2-72 |
| DECIMALS ANGLES | | CHKD. <i>[Signature]</i> | DATE 2/10/72 |
| .XXX = .005 | | ENS. <i>[Signature]</i> | DATE 2/15/72 |
| .XX = .02 | | PROJ. ENG. <i>[Signature]</i> | DATE 2/15/72 |
| .X = .1 | | PRD. <i>[Signature]</i> | DATE 2/15/72 |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | |
| MATERIAL | NEXT HIGHER ASSY. | TITLE | |
| ++ | B-DD-KB11-0 | IR DECODE & COND. CODES | |
| FINISH | SCALE | SIZE CODE | NUMBER |
| ++ | 7 OF 9 | DCS | M 8102-0-1 |
| | SHEET | DIST. | REV |
| | | | 2 |

| REV | CHG | NO |
|-----|-----|----|
| | | |

REV C
NUMBER 1
SIZE CODE DCS M 8102-0-1

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1-7-2018 W S J a 2
3000 3215



| REV | CHANGE NO. | DESCRIPTION |
|-----|------------|-------------|
| | | |
| | | |

| 74LS153 | SI | S0 |
|---------|----|---------|
| L | L | A → F |
| STB=L | H | B → F |
| | H | L C → F |
| | H | H D → F |
| STB=H | X | X F=L |

| COND. CODE BITS; CC CNTL & INSTR DECODE ROMS | | SLOT 8 | |
|--|---------|---|-----------------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. |
| 11/45 | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | |
| DECIMALS | ANGLES | PARTS LIST | |
| .XXX = .005 | ±0° 30' | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| .XX = .02 | | TITLE | |
| .X = .1 | | IR DECODE & COND. CODES | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | MATERIAL | |
| | | NEXT HIGHER ASSY. | |
| | | B-DD-KB11-0 | |
| | | SCALE | NUMBER |
| | | 1:1 | D CS M 8102-0-1 |
| | | SHEET 8 OF 9 | REV C |
| | | DIST. | |

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Table with 2 columns: INSTRUCTION and OCTAL ADDRESS (00 to 37). Lists instructions like ROR, ROL, ASL, MARK, MFP, MTP, SXT, CLR, COM, INC, DEC, NEG, ADC, SRC, TST, SUB, MOV, CMP, BIT, BIC, BIS, ADD, MUL, DIV, ASH, XOR, SOB.

INSTRUCTION DECODE ROM DM8598/AB. A grid of 8x8 bits mapping instruction bits M7-M0 to ROM bits SXT-DIVASHC.

COND. CODE CNTL. ROM DM8598/AC. A grid of 8x8 bits mapping instruction bits M7-M0 to ROM bits MOD ZN, EN ZN, CMOD 1, CMOD 0, ENC, VMOD 1, VMOD 0, ENV.

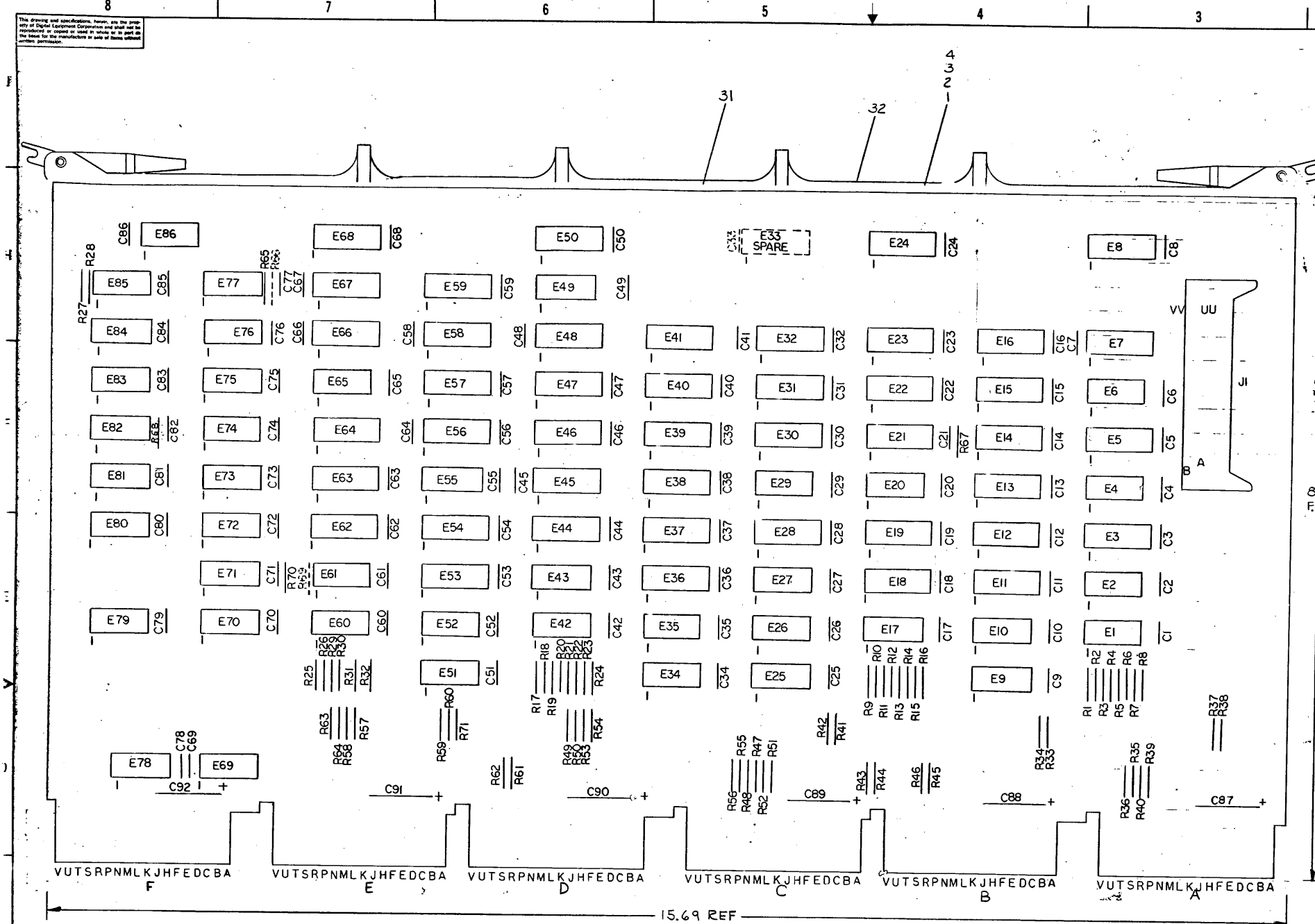
CCLD4 (RACC UCCL(2:0)=4)
CCLD5 (RACC UCCL(2:0)=5)
CCLD6 (RACC UCCL(2:0)=6)
CCLD7 (RACC UCCL(2:0)=7)

INSTRUCTION DEPENDENT CONTROL (RACA UCCL(2:0)=1). Large table showing control logic for instructions based on N, Z, V, and C flags. Includes equations like SHFR(15:0) and AMX15.

* ODD BYTE SWAPPED TO EVEN DURING COND. CODE CHECKING
NOTE: BYTE INSTRUCTION WITH DSTMB IS ALWAYS EVEN BYTE
X = Z(OLD)*DR15 + (SR=0)*DR15
SWAB INSTR. HAS SAME ROM ADDRESS AS ASL.B

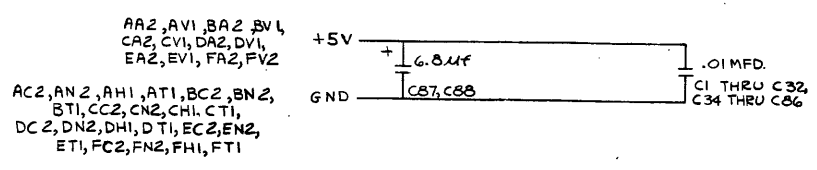
CC CNTL & INSTR DECODE ROM MAPS SLOT 8. Includes revision history table, drawing info (DRN, DATE, PROJ. ENG. ERIN ERIKSEN), and material/finish specifications.

REV. C
SIZE CODE DCS M8102-0-1



NOTES:
 1. UNLESS OTHERWISE NOTED RESISTANCE IS IN OHMS AND CAPACITANCE IS IN PICOFARADS. CAPS. WITHOUT VALUE NOTED .01 MFD.

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|--|----------------------------------|----------------|----------|
| 1 | | HANDLE, MODULE | E-PS-121011-2 | 32 |
| 12 | | EYELET | 9006732 | 31 |
| 1 | J1 | CONN 40PIN BERG | 1209941 | 30 |
| 2 | E47, E59 | IC DEC 74175 | 1910651 | 29 |
| 4 | E8, E24, E50, E68 | IC DEC 7485 | 1910224 | 28 |
| 12 | E11, E13, E15, E18, E22, E36, E38, E45, E53, E57, E63, E67 | IC DEC 74S174 | 1910550 | 27 |
| 1 | E31 | IC DEC 74S157 | 1910548 | 26 |
| 24 | E3, E5, E7, E12, E14, E16, E19, E21, E23, E28, E30, E32, E37, E39, E41, E44, E46, E48, E54, E56, E58, E62, E64, E66 | IC DEC 74S153 | 1910547 | 25 |
| 7 | E6, E49, E49, E80, E82, E83, E85 | IC DEC 74S74 | 1910544 | 24 |
| 1 | E79 | IC DEC 74S40 | 1910541 | 23 |
| 1 | E71 | IC DEC 74S20 | 1910539 | 22 |
| 8 | E4, E10, E29, E35, E52, E55, E65, E75 | IC DEC 74S04 | 1910534 | 21 |
| 2 | E20, E77 | IC DEC 74S11 | 1910537 | 20 |
| 3 | E70, E73, E86 | IC DEC 74S10 | 1910536 | 19 |
| 1 | E72 | IC DEC 74S00 | 1910532 | 18 |
| 1 | E40 | IC DEC 9318 | 1910454 | 17 |
| 8 | E9, E17, E25, E34, E51, E78, E81, E84 | IC DEC 74H01 | 1909849 | 16 |
| 4 | E1, E26, E42, E60 | IC DEC 8881 | 1909705 | 15 |
| 4 | E2, E27, E43, E61 | IC DEC 380 | 1909485 | 14 |
| 1 | E74 | IC DEC 74H50 | 1909060 | 13 |
| 1 | E76 | IC DEC 74H40 | 1905586 | 12 |
| 1 | R68 | RESISTOR 390Ω, 1/4W, 5% | 1300309 | 11 |
| 1 | R67 | RESISTOR 180Ω, 1/4W, 5% | 1301322 | 10 |
| 3 | R65, R70, R71 | RESISTOR 150Ω, 1/4W, 5% | 1300250 | 9 |
| 32 | R1, R3, R5, R7, R9, R11, R13, R15, R17, R19, R21, R23, R25, R27, R29, R31, R33, R35, R37, R39, R41, R43, R45, R47, R49, R51, R53, R55, R57, R59, R61, R63 | RESISTOR 330Ω, 1/4W, 5% | 1300295 | 8 |
| 32 | R2, R4, R6, R8, R10, R12, R14, R16, R18, R20, R22, R24, R26, R28, R30, R32, R34, R36, R38, R40, R42, R44, R46, R48, R50, R52, R54, R56, R58, R60, R62, R64 | RESISTOR 680Ω, 1/4W, 5% | 1301424 | 7 |
| 85 | C1 THRU C32 | CAPACITOR .01MFD, 50V, 20% AXIAL | 1001610 | 6 |
| 6 | C87 THRU C92 | CAPACITOR 6.8MFD, 35V, 10% | 1005306 | 5 |
| 1 | | ETCHED CIRCUIT BOARD | 5009804 | 4 |
| REF | | MODULE ECO HISTORY | B-MH-M8104-0-6 | 3 |
| REF | | ASSY/DRILLING HOLE LAYOUT | PAH-M8104-0-5 | 2 |
| REF | | X-Y COORDINATE HOLE LOCATION | KCO-M8104-0-4 | 1 |

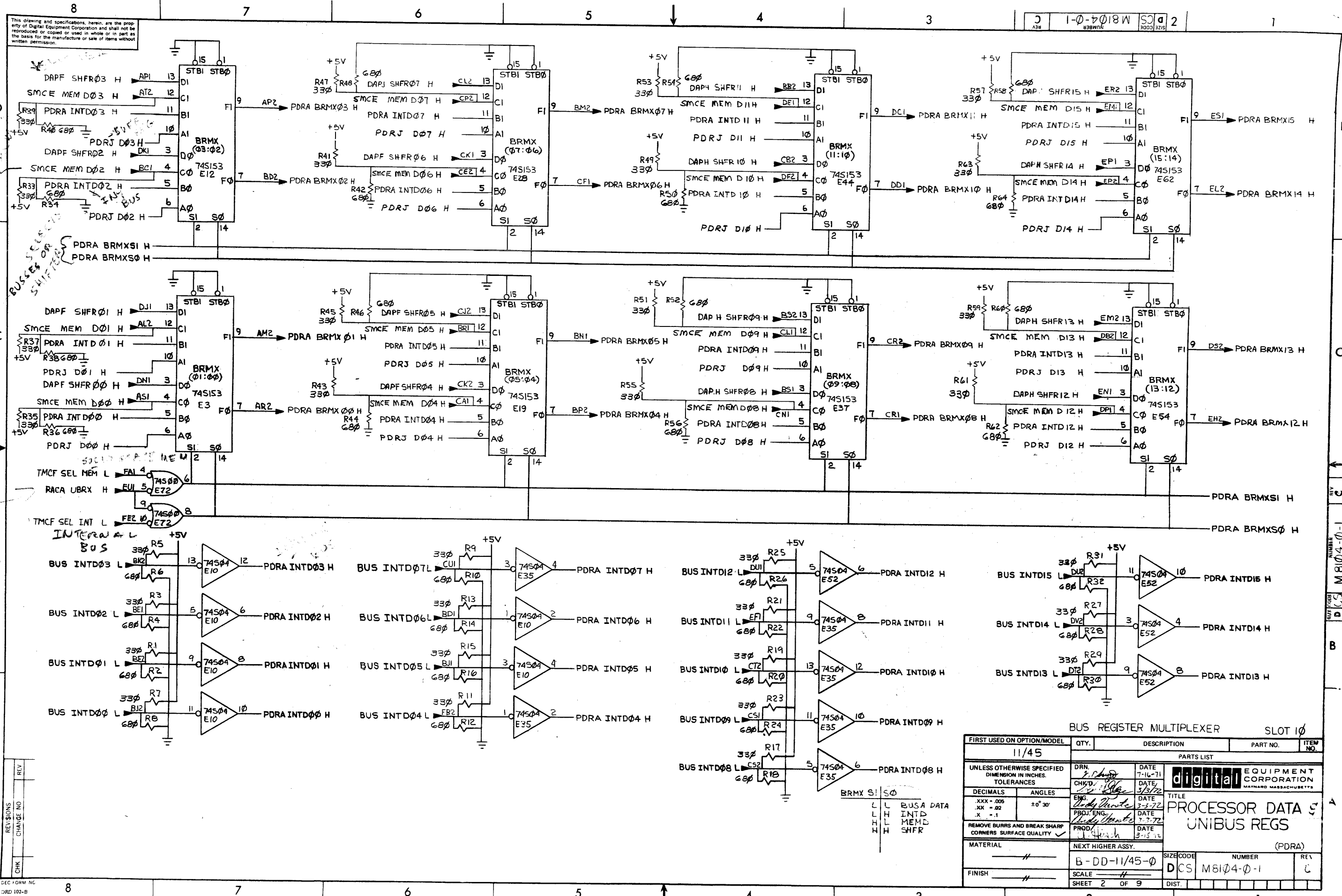


| IC TYPE | QTY | REF | DESCRIPTION | PART NO. | ITEM NO. |
|------------|-----|-----|-------------|----------|----------|
| DEC 74S153 | 12 | | | | |
| DEC 74175 | 2 | | | | |
| DEC 7485 | 4 | | | | |
| DEC 74S174 | 12 | | | | |
| DEC 74S157 | 1 | | | | |
| DEC 9318 | 1 | | | | |
| DEC 380 | 1 | | | | |

SEMICONDUCTOR CONVERSION CHART

| DEC NO. | EIA NO. | DEC NO. | EIA NO. |
|---------|---------|---------|---------|
| | | | |

DATE: 12-20-72
 TITLE: PROCESSOR DATA UNIBUS REGS.
 SCALE: 1:1
 SHEET: 1 OF 9



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| | | |
|-----|-----------|------|
| REV | NO | DATE |
| CHK | CHANGE NO | |

DEC FORM NO. DRD 102-B

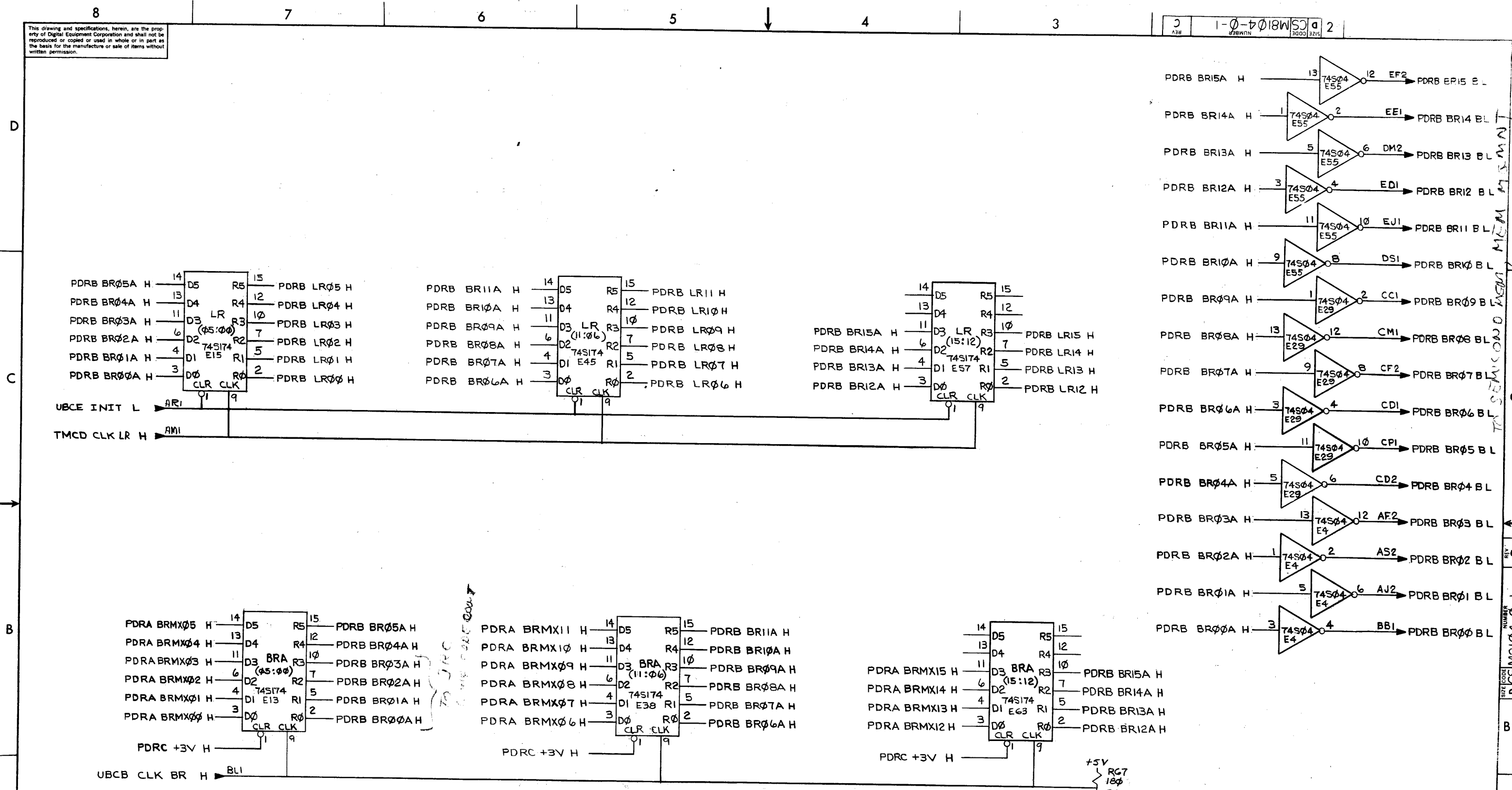
| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------------------------|--------------|---|---------------|
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. <i>[Signature]</i> | DATE 7-16-71 | PARTS LIST | |
| DECIMALS .XXX - .005 | ANGLES ±0° 30' | CHK'D. <i>[Signature]</i> | DATE 3/5/72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| .XX - .02 | | ENG. <i>[Signature]</i> | DATE 3-3-72 | TITLE | |
| .X - .1 | | PROJ. ENG. <i>[Signature]</i> | DATE 7-3-72 | PROCESSOR DATA UNIBUS REGS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. <i>[Signature]</i> | DATE 3-15-72 | (PDRJ) | |
| MATERIAL | NEXT HIGHER ASSY. | | | SIZE CODE | NUMBER |
| | | | | B-DD-11/45-0 | DCS M8104-0-1 |
| FINISH | SCALE | | | SHEET 2 OF 9 | REV C |
| | | | | DIST. | |

BRMX SI S0
 L L BUSA DATA
 L H INTD
 L L MEMD
 H H SHFR

BUS REGISTER MULTIPLEXER SLOT 10

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1-0-018M 2



REV. C
 NUMBER DCS M8104-0-1
 B
 TO SEMICONDUCTOR MANUFACTURING
 MCM 475 MNT

BUS REGISTER A; LIGHT REGISTER SLOT 10

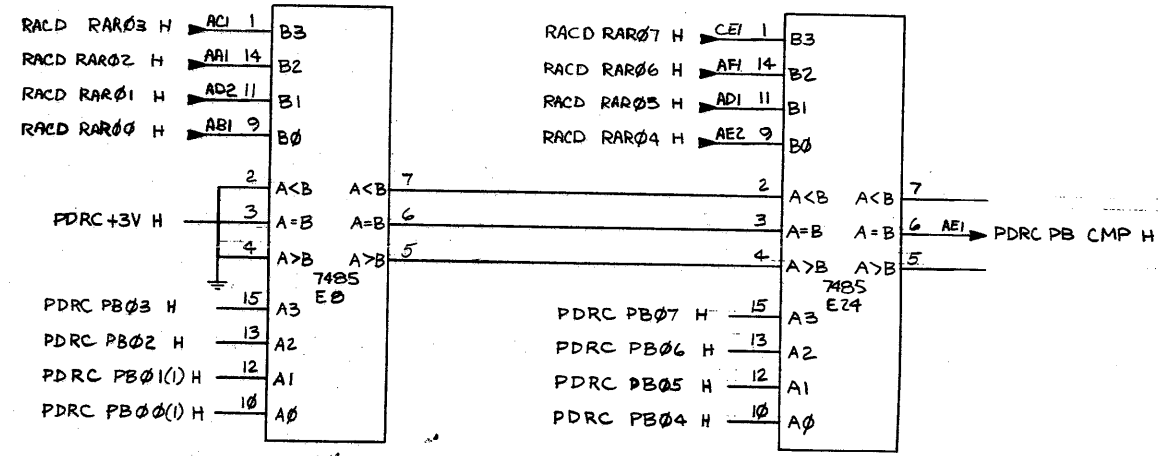
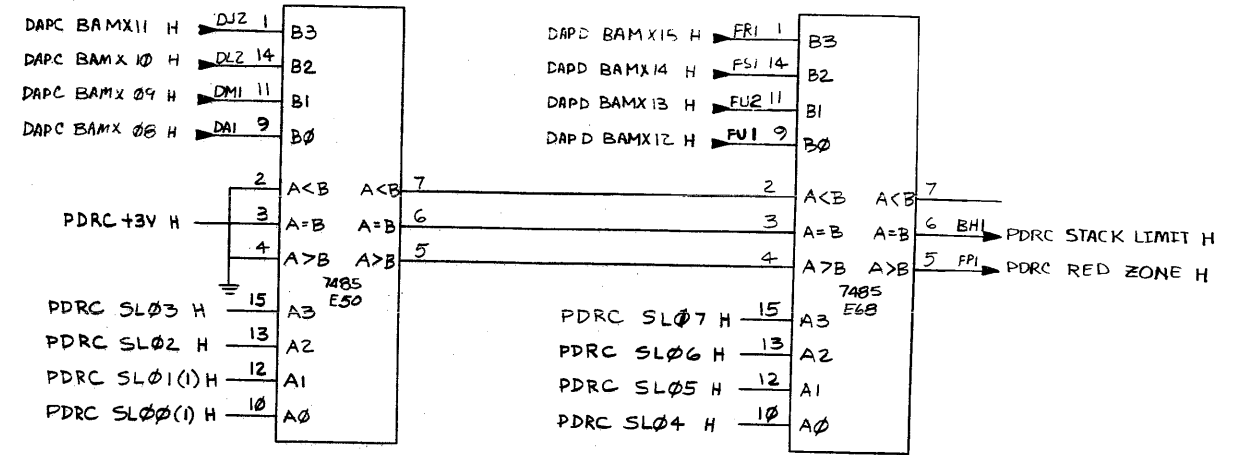
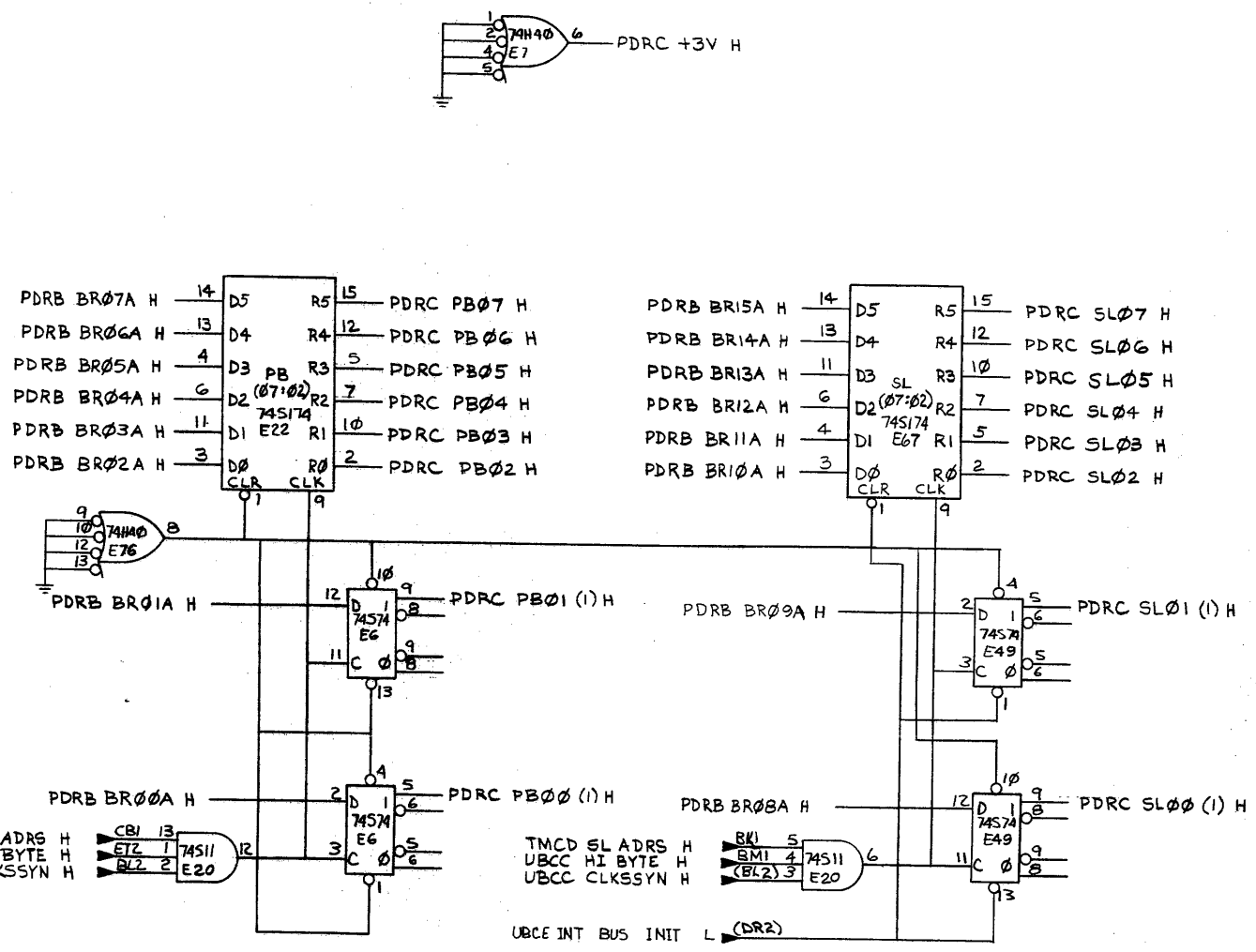
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|---|---|---------------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. <i>[Signature]</i> DATE 6-29-71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | CHK'D. <i>[Signature]</i> DATE 3/3/72 | | |
| .XXX = .005 | ±0° 30' | ENG. <i>[Signature]</i> DATE 3-3-72 | | |
| .XX = .02 | | PROJ. ENG. <i>[Signature]</i> DATE 3-3-72 | | |
| .X = .1 | | PROD. <i>[Signature]</i> DATE 3-15-72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | TITLE PROCESSOR DATA & UNIBUS REGS (PDRB) | |
| MATERIAL | | NEXT HIGHER ASSY. | SIZE CODE | NUMBER |
| | | | B-DD-11/45-0 | DCS M8104-0-1 |
| FINISH | | SCALE | | REV. C |
| | | SHEET 3 OF 9 | | |

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1-0-708A 2
 338WNN 3001123

D
 C
 B
 A

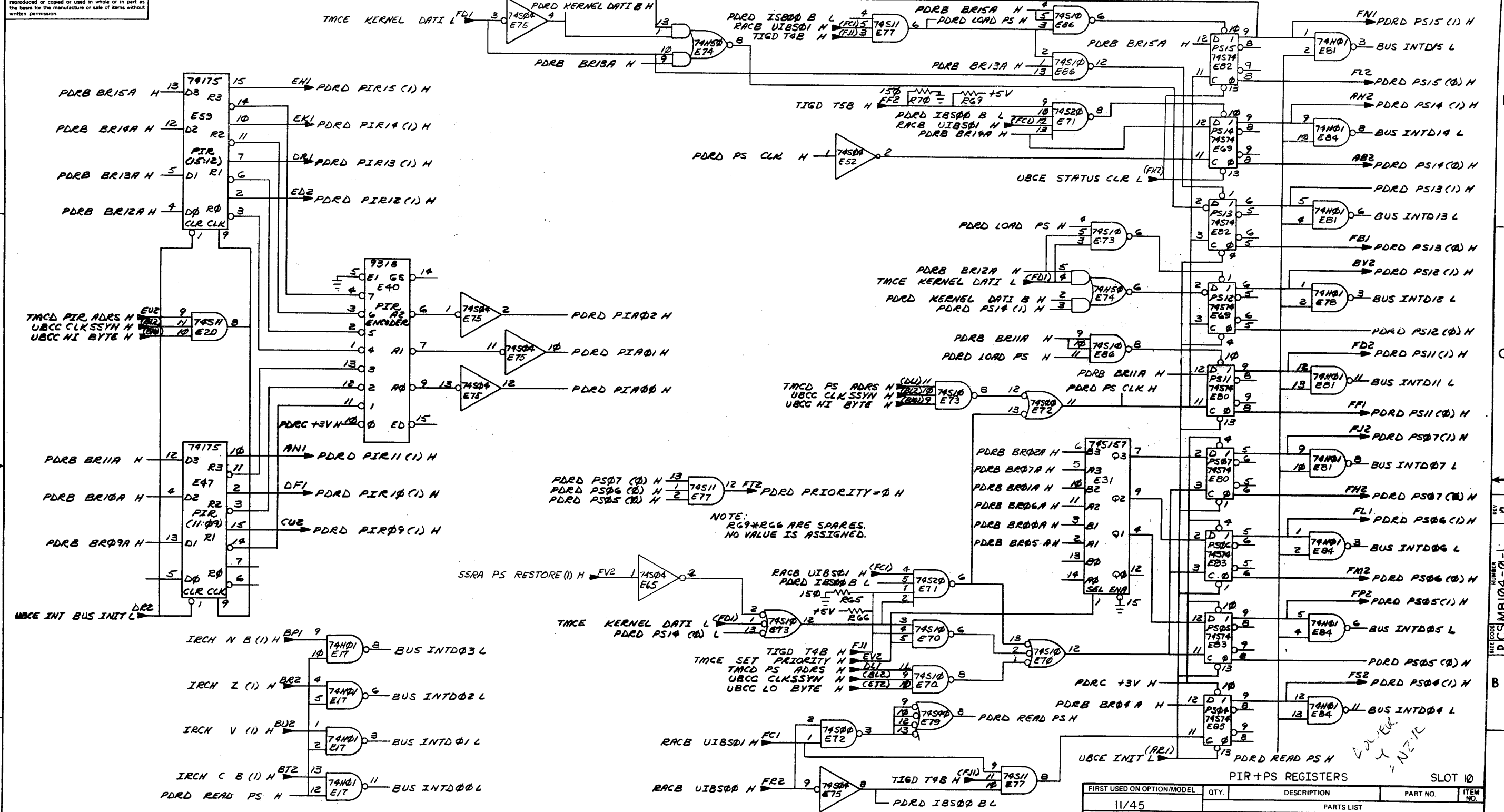
D
 C
 B
 A



PROGRAM BREAK & STACK LIMIT REGISTERS SLOT 10

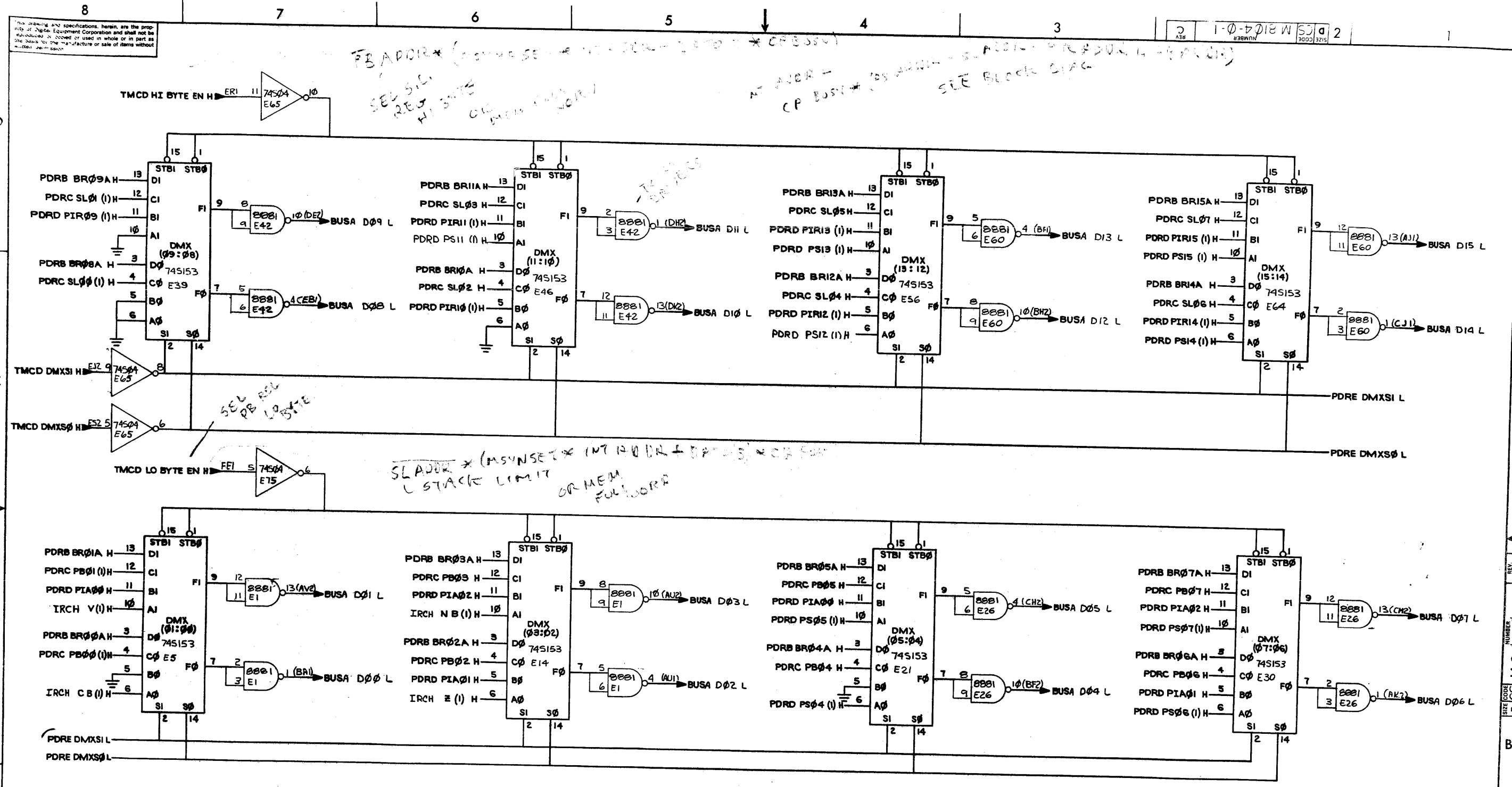
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|------------------------------|-----------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | TITLE | | |
| .XXX = .005 | ±0° 30' | PROCESSOR DATA & UNIBUS REGS | | |
| .XX = .02 | | PARTS LIST | | |
| .X = .1 | | TITLE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
| FINISH | | DCS | M8104-0-1 | C |
| SCALE | | SHEET 4 OF 9 | | DIST. |
| | | | | |

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| REV | CHANGE NO | DATE |
|-----|-----------|------|
| | | |
| | | |
| | | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|-------------------------------|-----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED | | DATE | DIGITAL EQUIPMENT CORPORATION | |
| DIMENSION IN INCHES | | 2-25-72 | MAYNARD MASSACHUSETTS | |
| TOLERANCES | | DATE | TITLE | |
| DECIMALS | ANGLES | 3/3/72 | PROCESSOR DATA & UNIBUS REGS | |
| .XXX - .005 | ±0° 30' | DATE | | |
| .XX - .02 | | 3-3-72 | | |
| .X - .1 | | DATE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE | | |
| | | 3-15-72 | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| | | B-DD-11/45-0 | SIZE CODE | NUMBER |
| FINISH | | | DCS | M8104-0-1 |
| | | SCALE | | REV |
| | | SHEET 5 OF 9 | | C |



PS ADDR L PDR ADDR * DATA (P) * MSYNSET
 PS ADDR + SL ADDR + FB ADDR * DATA (P) * MSYNSET

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|------------------------|--------------|---|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN S.W.R. [Signature] | DATE 7/19/71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE PROCESSOR DATA & UNIBUS REGS. (PDRE) | |
| DECIMALS | ANGLES | CHKD [Signature] | DATE 3/3/72 | | |
| XXX = .006 | ± 0° 30' | ENG [Signature] | DATE 3-3-72 | | |
| XX = .02 | | PROJ. ENG [Signature] | DATE 3-3-72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PRD [Signature] | DATE 3-1-72 | NUMBER DCS M8104-0-1 | |
| MATERIAL | | NEXT HIGHER ASSY. | | REV. C | |
| FINISH | | SCALE | | DIST. | |
| | | B-DD-11/45-0 | | SHEET 6 OF 9 | |

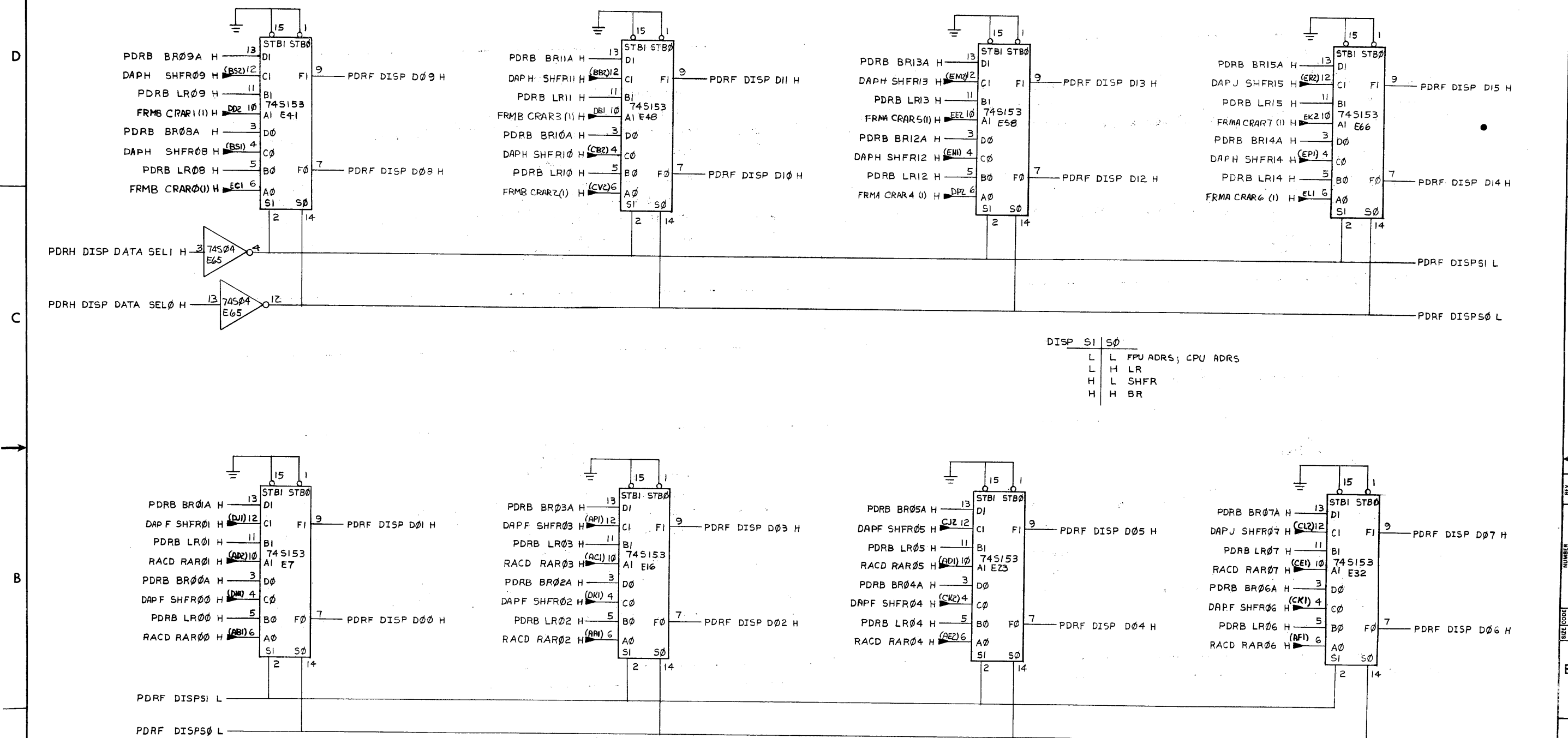
| DMX | SI | S0 | OUTPUT |
|-----|----|----|----------|
| L | L | | STATUS |
| L | H | | PIR; PIA |
| H | L | | SL; PB |
| H | H | | BR |

| REV | CHG | NO | DATE |
|-----|-----|----|------|
| | | | |

REV. 102-1

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1-0-4018 W SCS 2



| DISP | S1 | S0 |
|------|----|--------------------|
| L | L | FPU ADRS; CPU ADRS |
| L | H | LR |
| H | L | SHFR |
| H | H | BR |

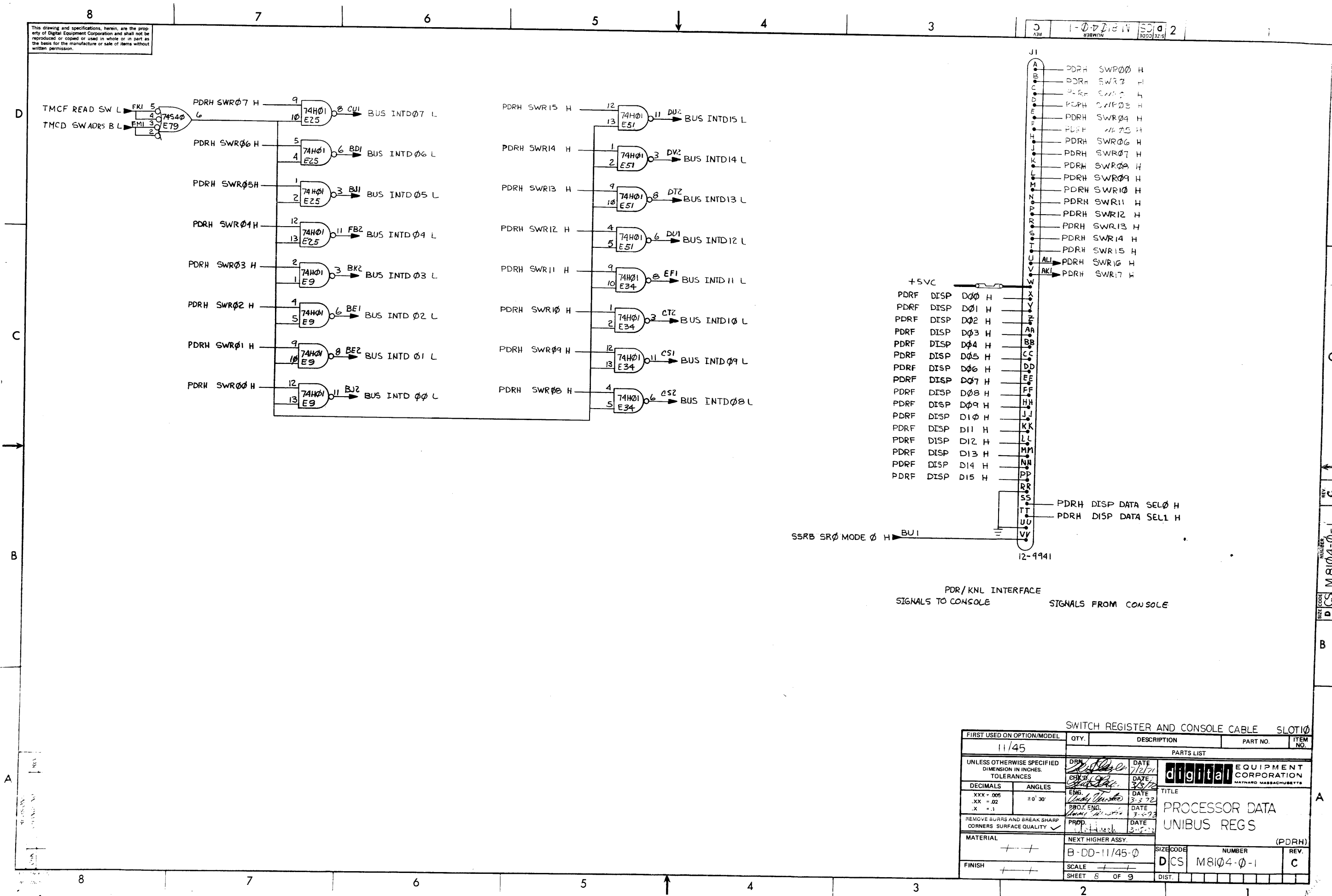
| REV | CHG | NO |
|-----|-----|----|
| | | |

DATA DISPLAY MULTIPLEXER SLO10

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------------------|--------------|--|---------------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN <i>[Signature]</i> | DATE 7-2-71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS ANGLES | CHK'D <i>[Signature]</i> | DATE 5/1/72 | TITLE | |
| .XXX = .005 .XX = .02 X = .1 | ENG. <i>[Signature]</i> | DATE 3-3-72 | PROCESSOR DATA & UNIBUS REGS (PDRF) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. <i>[Signature]</i> | DATE 3-7-72 | MATERIAL | |
| | PROD. <i>[Signature]</i> | DATE 3-15-72 | NEXT HIGHER ASSY. | |
| | | | B-DD-11/45-0 | |
| FINISH | | | SCALE | NUMBER |
| | | | | DCS M8104-0-1 |
| | | | SHEET 7 OF 9 | REV. C |

REV C
NUMBER M8104-0-1
SIZE CODE DCS

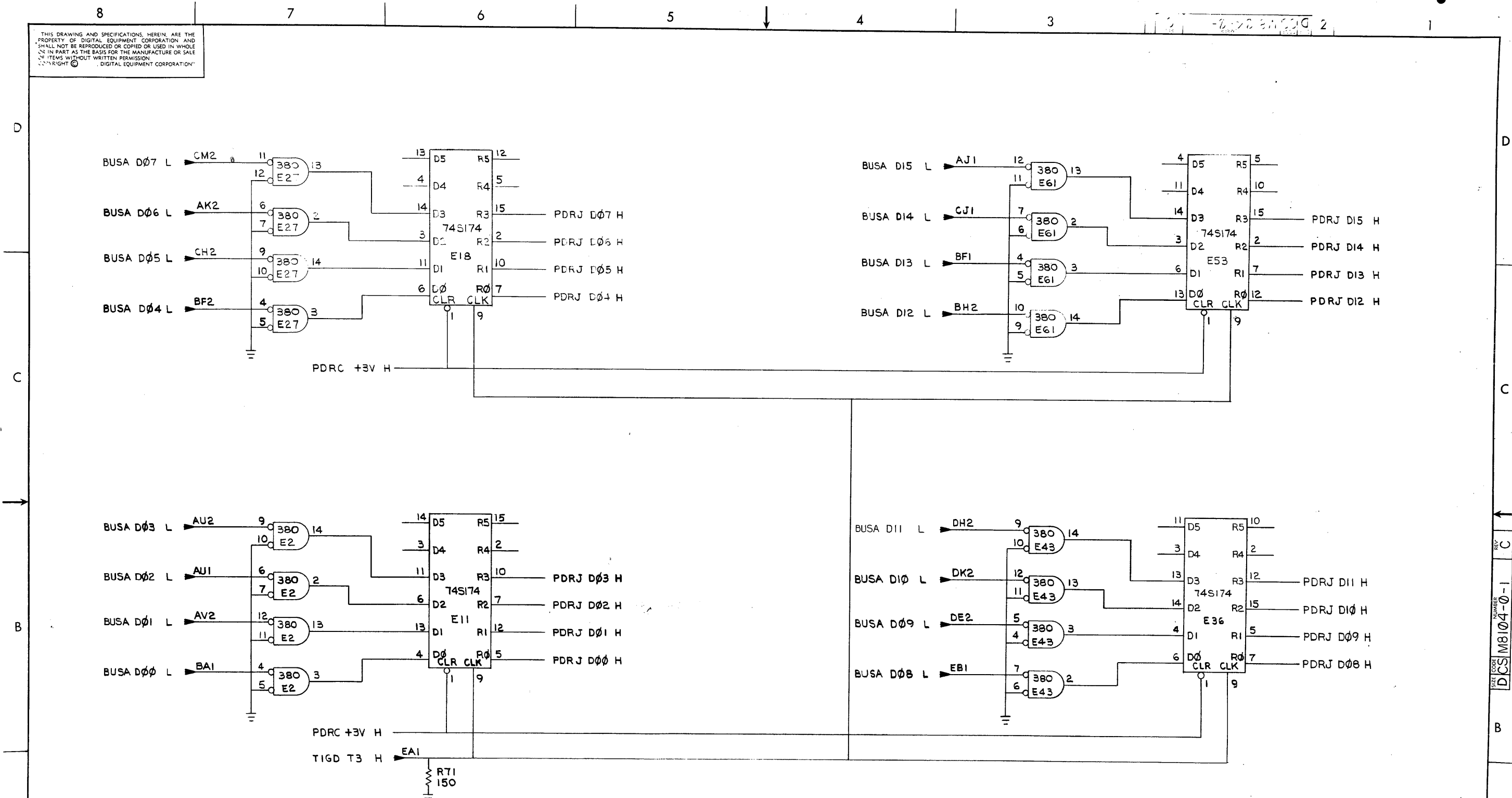
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PDR/KNL INTERFACE
 SIGNALS TO CONSOLE SIGNALS FROM CONSOLE

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|------------|-------------|---|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | CHK'D | DATE | | |
| .XXX = .005 | ±0° 30' | EMG. | DATE | | |
| .XX = .02 | | PROJ. ENG. | DATE | | |
| .X = .1 | | PROJ. ENG. | DATE | TITLE PROCESSOR DATA UNIBUS REGS (PDRH) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. | DATE | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | | NUMBER | REV. |
| FINISH | B-DD-11/45-0 | D | CS | M8104-0-1 | C |
| SHEET 6 OF 9 | | DIST. | | | |

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BUS BUFFER REG SLOT 10

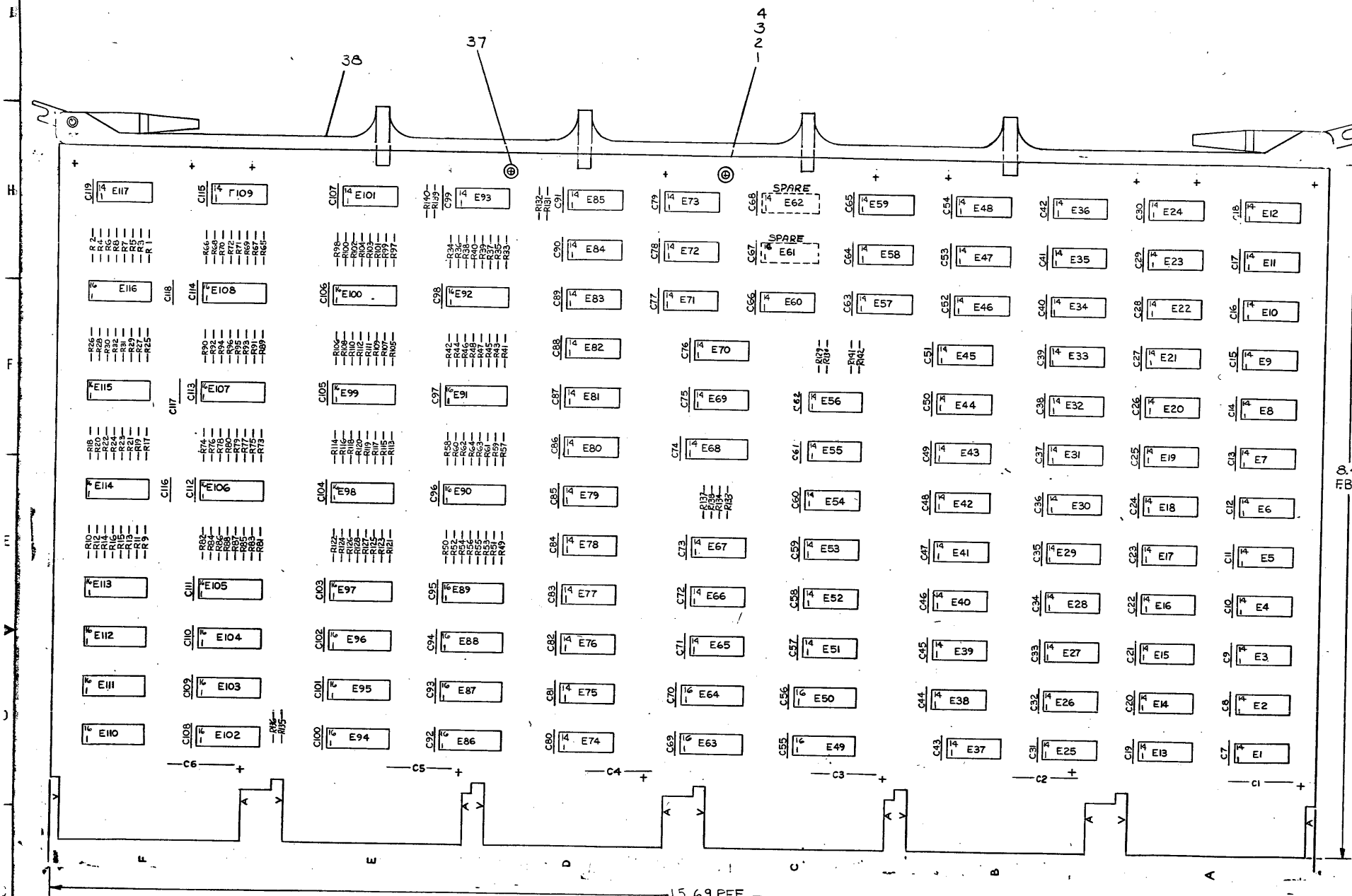
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|-----------|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | | | | |
| TOLERANCES | | | | |
| DECIMALS | ANGLES | DATE | | |
| .xxx = .005 | :0° 30' | DRN | 1/2/73 | |
| .xx = .02 | | CHK'D | | |
| .x = .1 | | ENG | 1/15/73 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y | | | | |
| PARTS LIST | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | B-DD-11/45-0 | | |
| | | SCALE | NUMBER | REV. |
| | | DCS | M8104-0-1 | C |
| SHEET 9 OF 9 | | DIST. | | |



TITLE
 PROCESSOR DATA
 UNIBUS REGS (PDRJ)

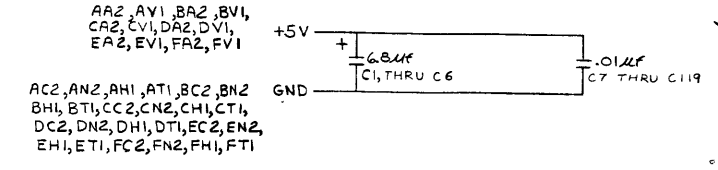
REV C
 NUMBER M8104-0-1
 DCS

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- NOTES:
 1. UNLESS OTHERWISE NOTED, RESISTANCE IS IN Ω AND CAPACITANCE IS IN P.F.F. CAPS. WITHOUT VALUE NOTED ARE .01 MFD
 2. E61 C62 ARE SPARE IC LOCATIONS
 3. R131, R133, R135, R137, R139 ARE NOT USED

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|---|-------------------------|----------|-----|-----------------|-------------|----------|----------|
| 1 | E91 | IC DEC 74187 (OR 33Φ) | 23-C03A2 | 23 | | | | |
| 1 | E89 | IC DEC 74187 (OR 33Φ) | 23-C02A2 | 22 | | | | |
| 1 | E90 | IC DEC 74187 (OR 33Φ) | 23-C01A2 | 21 | | | | |
| 12 | E1, E2, E13, E14, E25, E26, E34, E37, E38, E73, E109, E117 | IC DEC 74574 | 1910544 | 20 | | | | |
| 1 | E65 | IC DEC 74574-45 | 1910950 | 19 | | | | |
| 12 | E86, E87, E88, E94, E95, E96, E102, E103, E104, E110, E111, E112 | IC DEC 745174 | 1910550 | 18 | | | | |
| 4 | E49, E50, E63, E64, E5, E7, E8, E9, E11, E12, E17, E18, E19, E20, E21, E22, E23, E24, E33, E35, E39, E42, E43, E44, E45, E46, E47, E51, E54, E65, E70, E71, E74, E75, E76, E77, E80, E81, E82, E83, E101, E32 | IC DEC 745153 | 1910547 | 17 | | | | |
| 38 | E42, E43, E44, E45, E46, E47, E51, E54, E65, E70, E71, E74, E75, E76, E77, E80, E81, E82, E83, E101, E32 | IC DEC 74564 | 1910542 | 16 | | | | |
| 1 | E15 | IC DEC 74540 | 1910541 | 15 | | | | |
| 3 | E16, E30, E41 | IC DEC 74520 | 1910539 | 14 | | | | |
| 4 | E55, E66, E69, E85 | IC DEC 74511 | 1910537 | 13 | | | | |
| | E3, E10, E28, E29, E40, E48, E53, E59, E60, E67 | IC DEC 74510 | 1910536 | 12 | | | | |
| 11 | E6, E27, E34, E52, E56, E57, E72, E78, E79, E84, E93 | IC DEC 74504 | 1910534 | 11 | | | | |
| 3 | E4, E31, E58 | IC DEC 74500 | 1910532 | 10 | | | | |
| 66 | R2, R4, R6, R8, R10, R12, R14, R16, R18, R20, R22, R24, R26, R28, R30, R32, R34, R36, R38, R40, R42, R44, R46, R48, R50, R52, R54, R56, R58, R60, R62, R64, R66, R68, R70, R72, R74, R76, R78, R80, R82, R84, R86, R88, R90, R92, R94, R96, R98, R100, R102, R104, R106, R108, R110, R112, R114, R116, R118, R120, R122, R124, R126, R128, R130, R142 | RESISTOR 680Ω, 1/4W, 5% | 1301424 | 9 | | | | |
| 5 | R132, R134, R136, R138, R140 | RESISTOR 150Ω, 1/4W, 5% | 1300250 | 7 | | | | |
| 1 | E107 | IC DEC 74187 (OR 33Φ) | 23-C09A2 | 29 | | | | |
| 1 | E100 | IC DEC 74187 (OR 33Φ) | 23-C08A2 | 28 | | | | |
| 1 | E99 | IC DEC 74187 (OR 33Φ) | 23-C07A2 | 27 | | | | |
| 1 | E90 | IC DEC 74187 (OR 33Φ) | 23-C06A2 | 26 | | | | |
| 1 | E97 | IC DEC 74187 (OR 33Φ) | 23-C05A2 | 25 | | | | |
| 1 | E92 | IC DEC 74187 (OR 33Φ) | 23-C04A2 | 24 | | | | |
| | | | | | | | | |



| IC TYPE | GND | +5V | FROM PT | TO PT |
|---------|-----|-----|---------|-------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

JUMPER LIST

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|-----------------------|----------------|-----|-----------------|-------------|----------|----------|
| 1 | R142 | RESISTOR 1K, 1/4W, 5% | 1300365 | 39 | | | | |
| 1 | | HANDLE, MODULE | E-PS-1210711-2 | 38 | | | | |
| 12 | | EYELET | 9006732 | 37 | | | | |
| 1 | E116 | IC DEC 74187 (OR 33Φ) | 23-C44A2 | 36 | | | | |
| 1 | E113 | IC DEC 74187 (OR 33Φ) | 23-C43A2 | 35 | | | | |
| 1 | E114 | IC DEC 74187 (OR 33Φ) | 23-C42A2 | 34 | | | | |
| 1 | E115 | IC DEC 74187 (OR 33Φ) | 23-C41A2 | 33 | | | | |
| 1 | E108 | IC DEC 74187 (OR 33Φ) | 23-C12A2 | 32 | | | | |
| 1 | E106 | IC DEC 74187 (OR 33Φ) | 23-C11A2 | 31 | | | | |
| 1 | E105 | IC DEC 74187 (OR 33Φ) | 23-C10A2 | 30 | | | | |
| 1 | E101 | IC DEC 74187 (OR 33Φ) | 23-C09A2 | 29 | | | | |
| 1 | E100 | IC DEC 74187 (OR 33Φ) | 23-C08A2 | 28 | | | | |
| 1 | E99 | IC DEC 74187 (OR 33Φ) | 23-C07A2 | 27 | | | | |
| 1 | E90 | IC DEC 74187 (OR 33Φ) | 23-C06A2 | 26 | | | | |
| 1 | E97 | IC DEC 74187 (OR 33Φ) | 23-C05A2 | 25 | | | | |
| 1 | E92 | IC DEC 74187 (OR 33Φ) | 23-C04A2 | 24 | | | | |

ETCH BOARD REV C

REVISIONS

ORIGINATED

CHANGED

DATE

DESCRIPTION

SEMICONDUCTOR CONVERSION CHART

DATE

SCALE

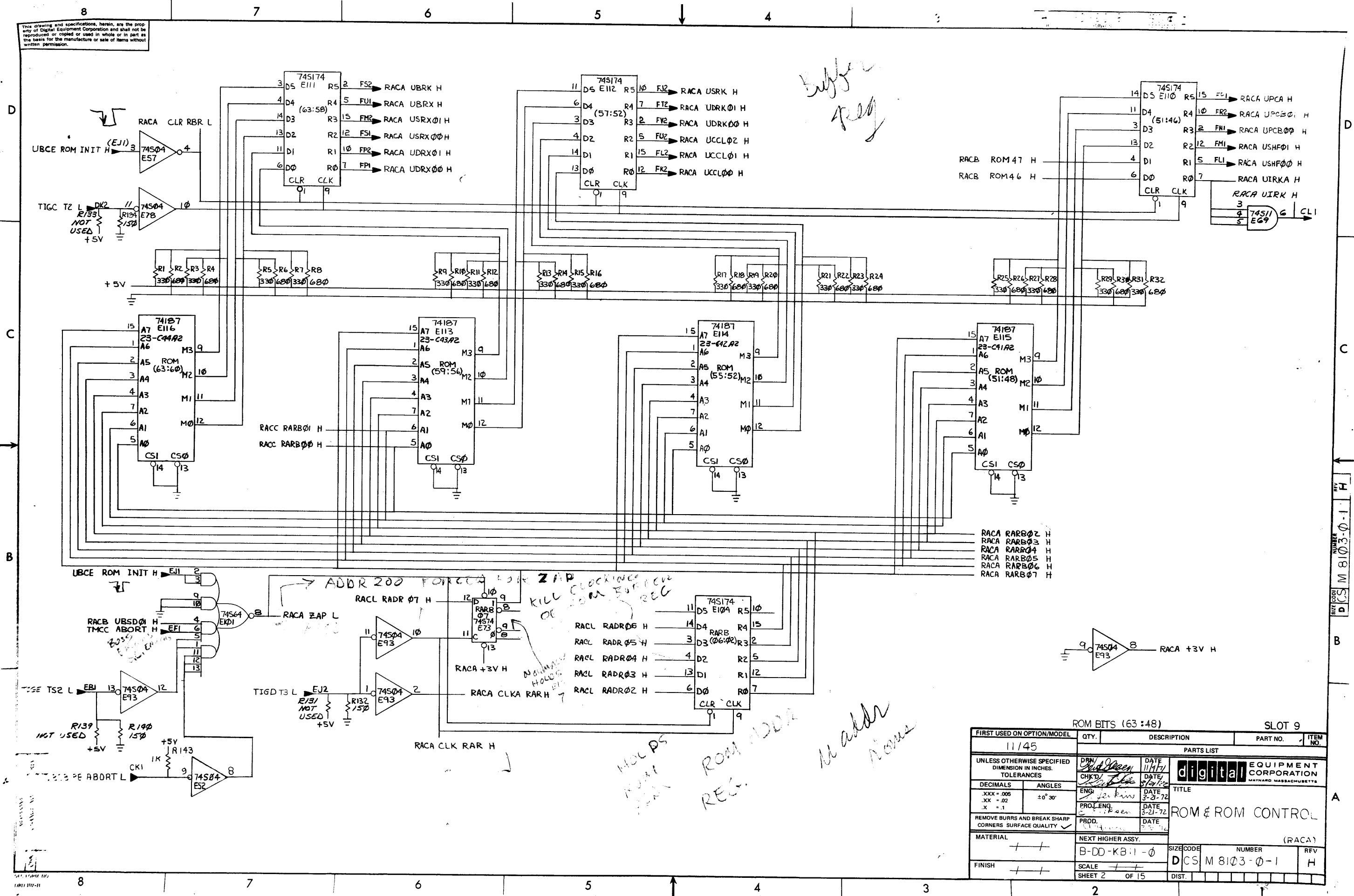
SHEET

OF

11

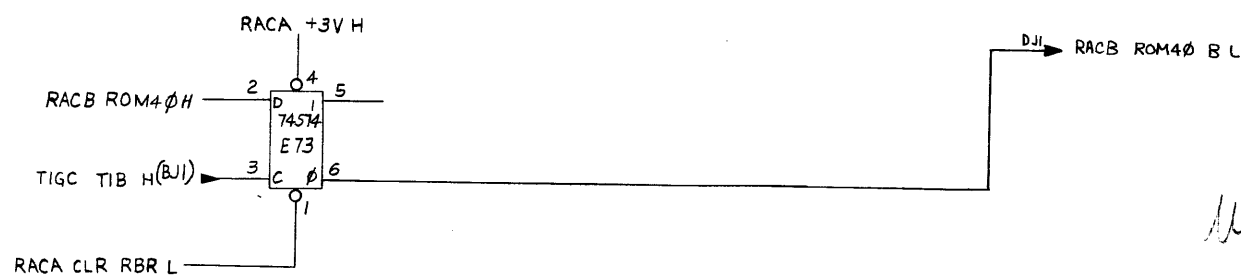
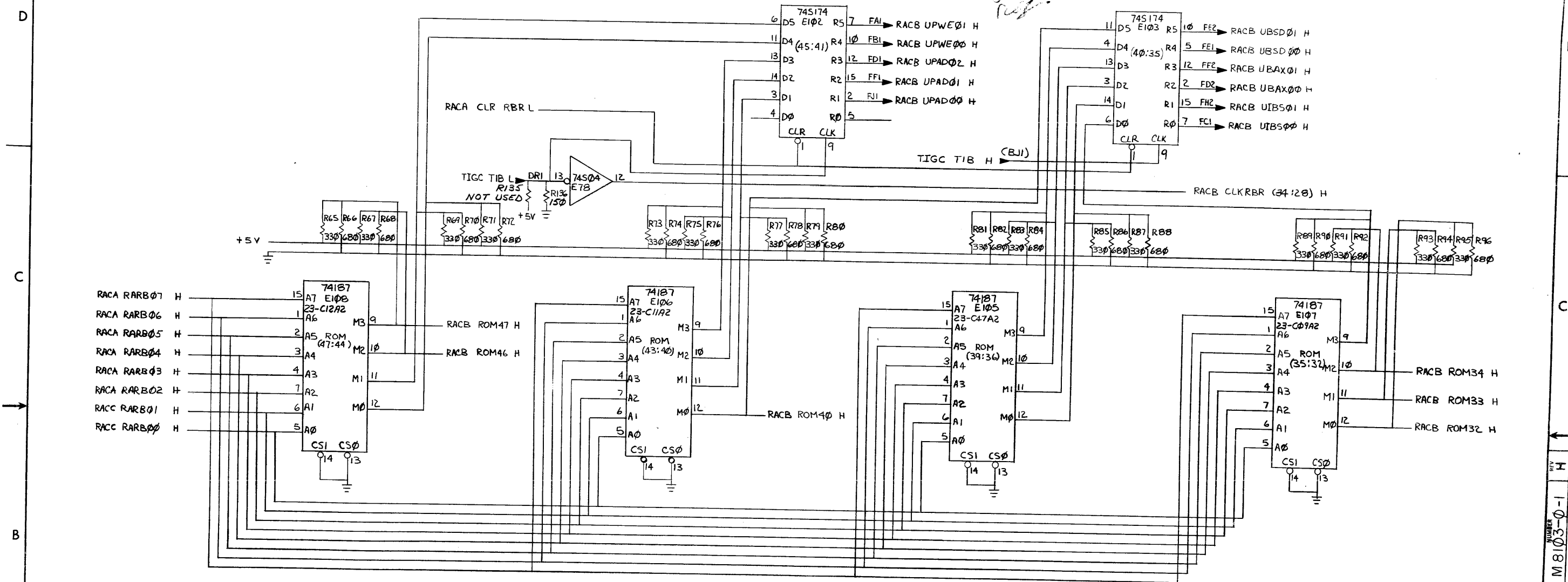
11

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| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|--------------|--|------------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE 11/47 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS | ANGLES | DATE 5/21/72 | | |
| .XXX = .005 | ±0° 30' | DATE 3-21-72 | TITLE ROM & ROM CONTROL | |
| .XX = .02 | | DATE 3-21-72 | | |
| .X = .1 | | DATE | (RACA) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | | | |
| FINISH | B-DD-KB-1-0 | | SIZE CODE | NUMBER |
| | SCALE | | DCS | M 8103-0-1 |
| | SHEET 2 OF 15 | | DIST. | |

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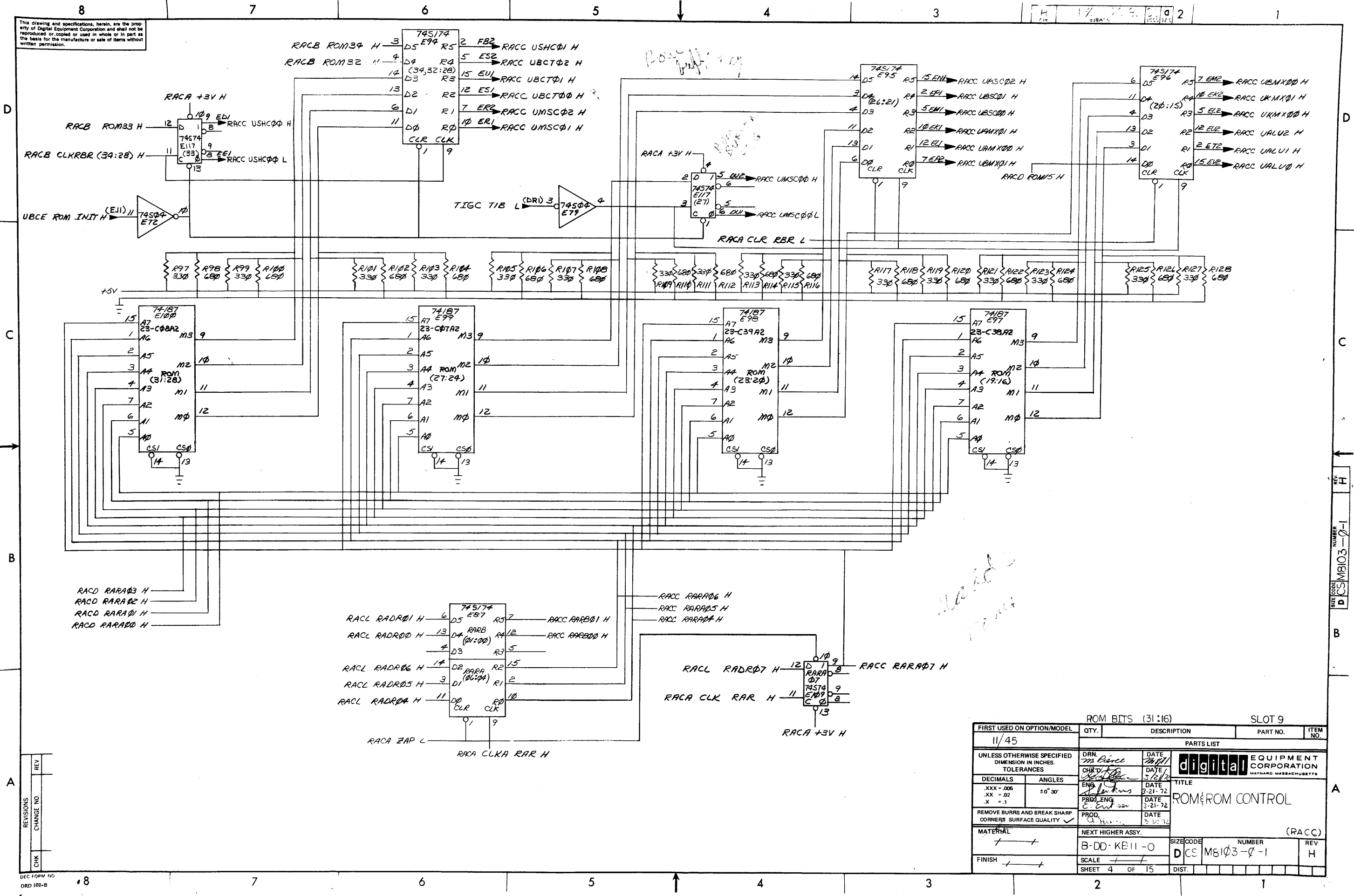


W. J. ...

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|----------|-------------------|-------------------------------|----------|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE | digital EQUIPMENT CORPORATION | | |
| DECIMALS | ANGLES | 11/9/71 | MAYNARD MASSACHUSETTS | | |
| .XXX = .005 | ± 0° 30' | DATE | TITLE | | |
| .XX = .02 | | 3-21-72 | ROM FROM CONTROL | | |
| .X = .1 | | DATE | REV | | |
| | | 3-24-72 | H | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE | REV | | |
| | | 3-20-72 | H | | |
| MATERIAL | | NEXT HIGHER ASSY. | | (RACF) | |
| FINISH | | B-DD-KB11-φ | | REV | |
| | | SCALE | | REV | |
| | | SHEET 3 OF 15 | | REV | |
| | | DIST. | | REV | |

REV

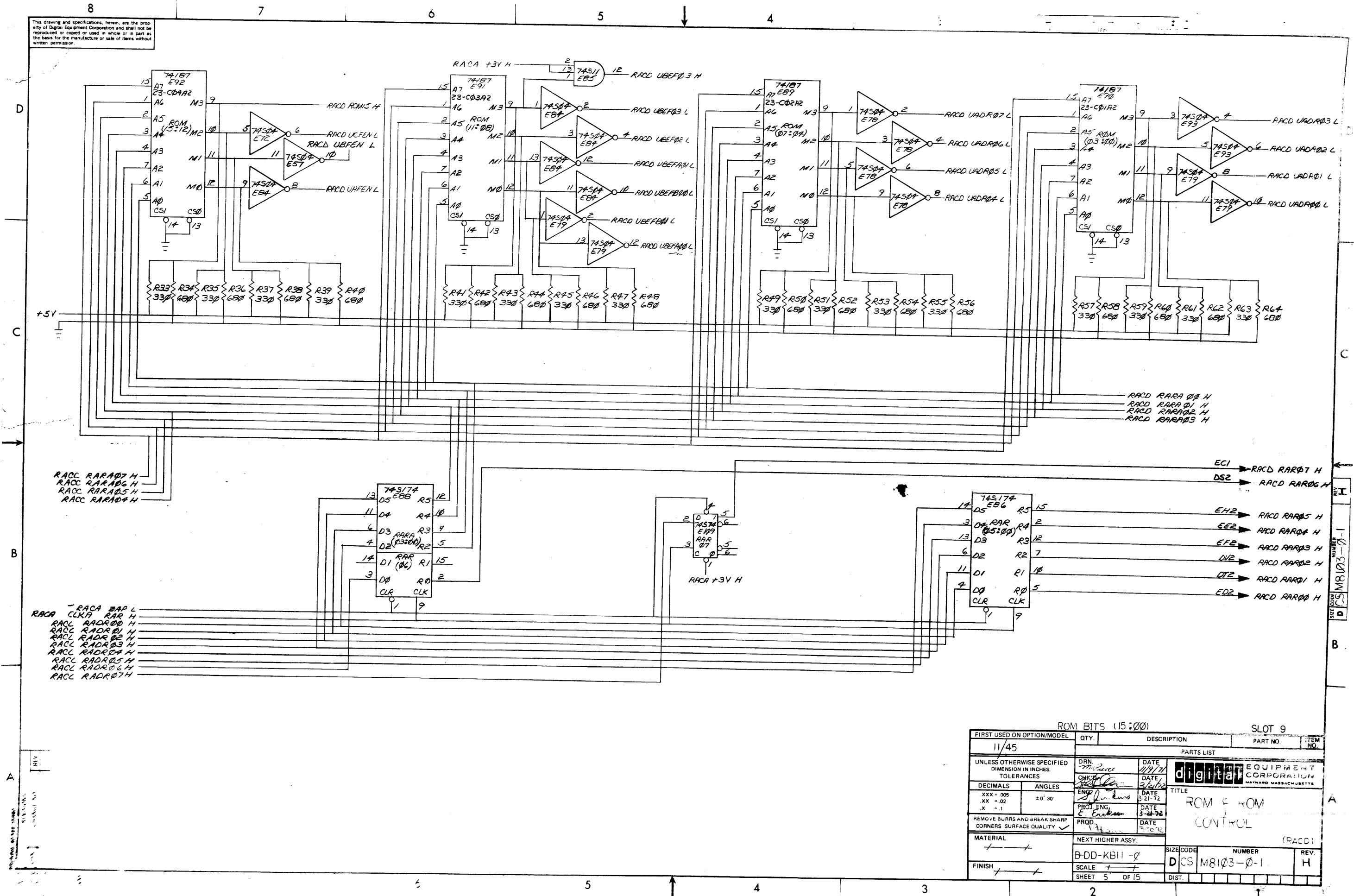
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| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|--|---------------------------|---------------------|-----------------------------|---------------------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. <i>M. Pierce</i> | DATE <i>2/11/71</i> | | |
| DECIMALS | | CHK'D. <i>[Signature]</i> | DATE <i>3/12/72</i> | | |
| ANGLES | | ENG. <i>[Signature]</i> | DATE <i>3-21-72</i> | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. <i>[Signature]</i> | DATE <i>3-30-72</i> | TITLE ROM & ROM CONTROL | |
| MATERIAL | | NEXT HIGHER ASSY. | | (RACC) | |
| FINISH | | B-DD-KB11-0 | | SIZE CODE D CS M8103-0-1 | NUMBER REV. H |
| SHEET 4 OF 15 | | DIST. | | | |

| REV. | CHANGE NO. | REVISIONS |
|------|------------|-----------|
| | | |
| | | |

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| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|----------|-------------------|-------------|--|---------------|
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN | DATE | PARTS LIST | |
| DECIMALS | ANGLES | CHKD | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| XXX = .005 | ± 0° 30' | ENGR | DATE | TITLE | |
| XX = .02 | | PROJ. ENGR | DATE | ROM & ROM CONTROL | |
| X = .1 | | PROD. | DATE | ROM & ROM CONTROL (RACC) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| | | | | B-DD-KB11-0 | DCS M8103-0-1 |
| MATERIAL | | | | SCALE | REV. |
| | | | | + | H |
| FINISH | | | | SHEET | SHEET |
| | | | | 5 OF 15 | 5 OF 15 |

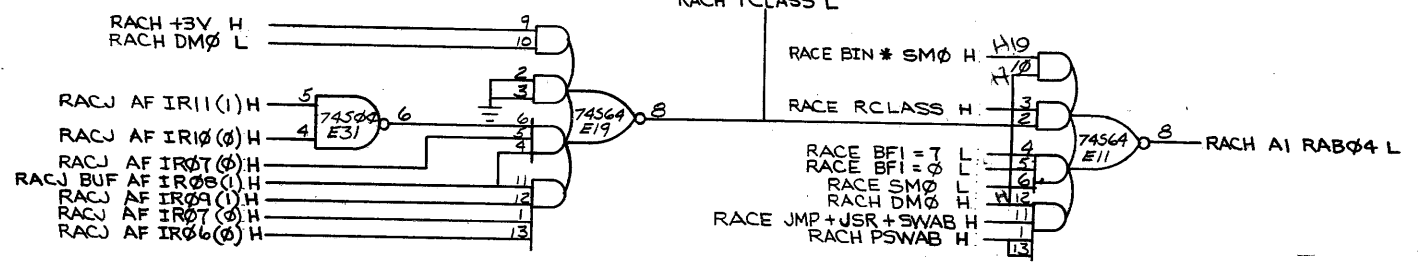
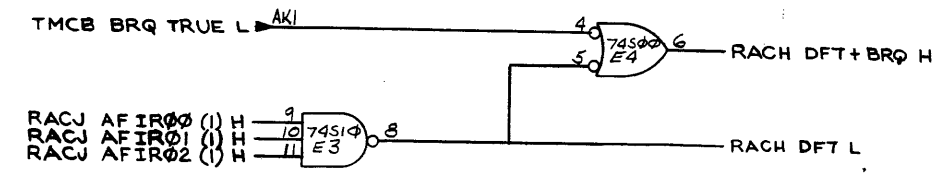
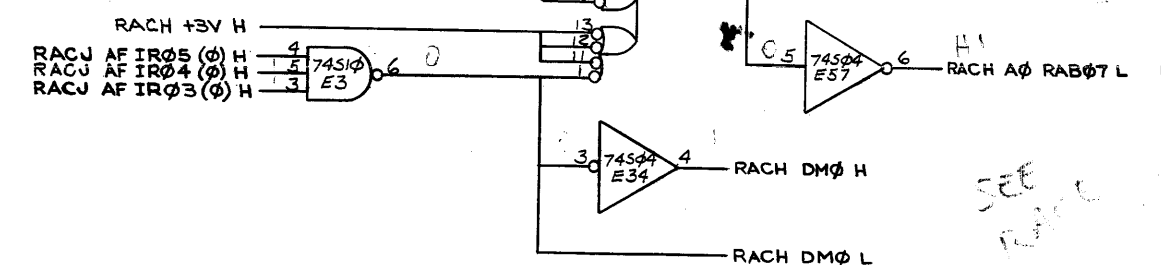
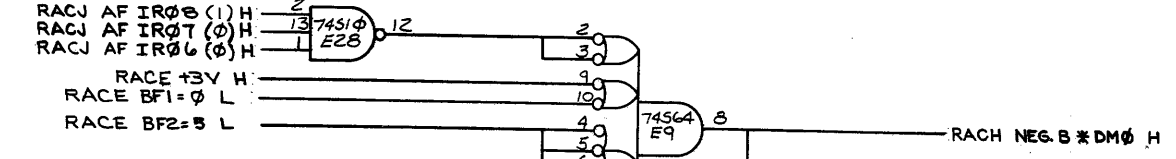
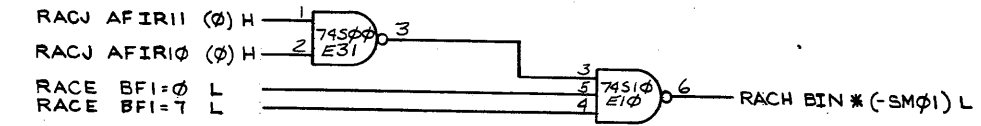
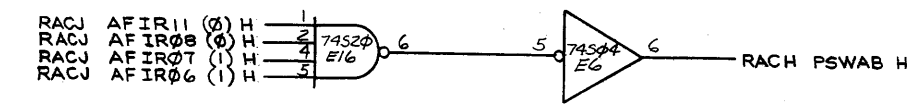
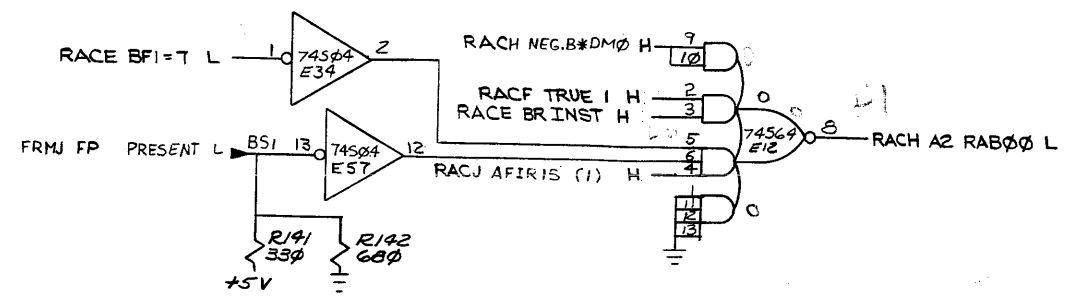
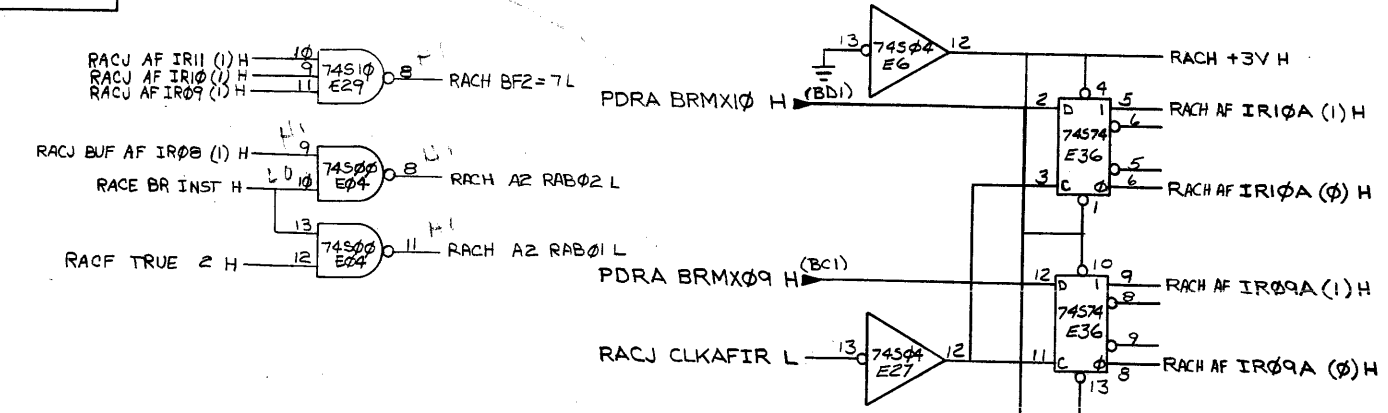
ROM BITS (15:00)

SLOT 9

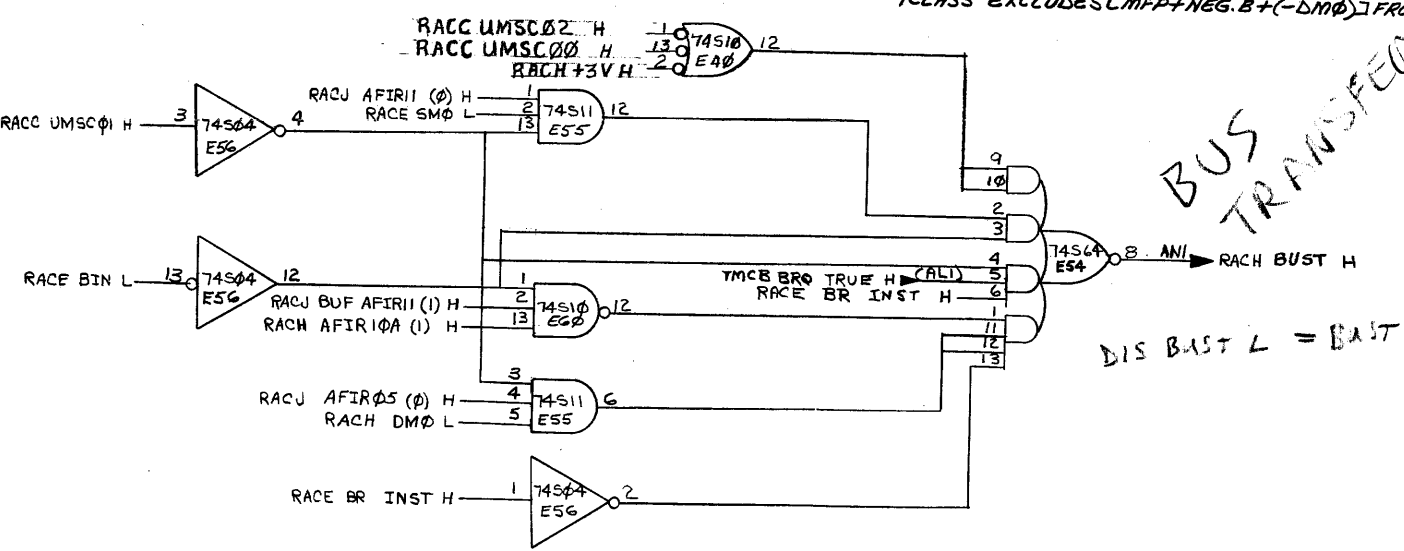
NUMBER 0-1
SHEET 5 OF 15

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H 1-7-2018W 2



RCLASS=(CLR.B*ASL.B)+MFP+SXT+XOR
TCLASS EXCLUDES C.MFP+NEG.B+(-DM0) FROM RCLASS



SEE PAGE 10

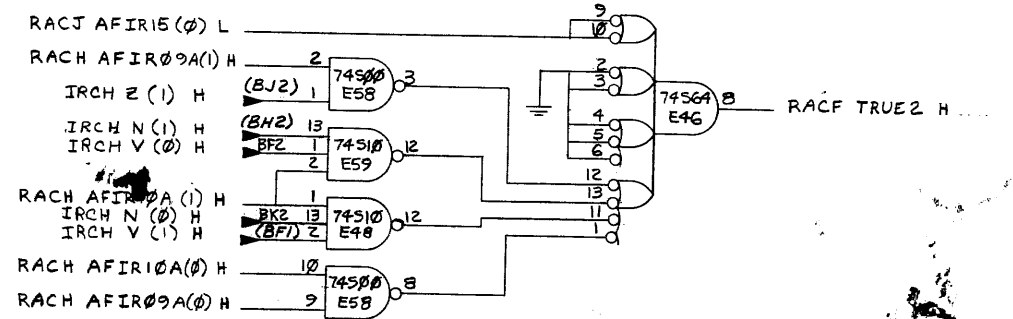
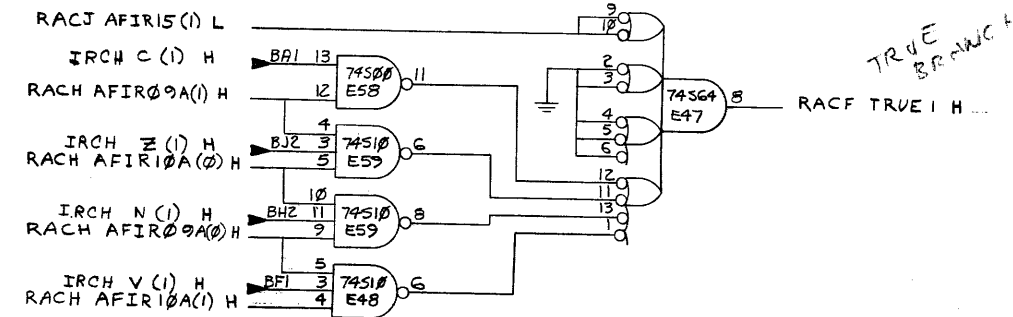
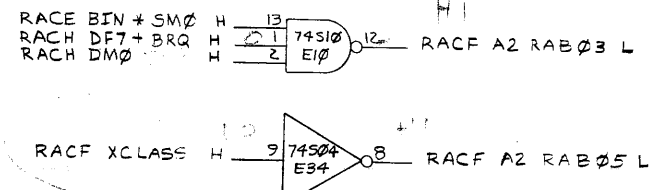
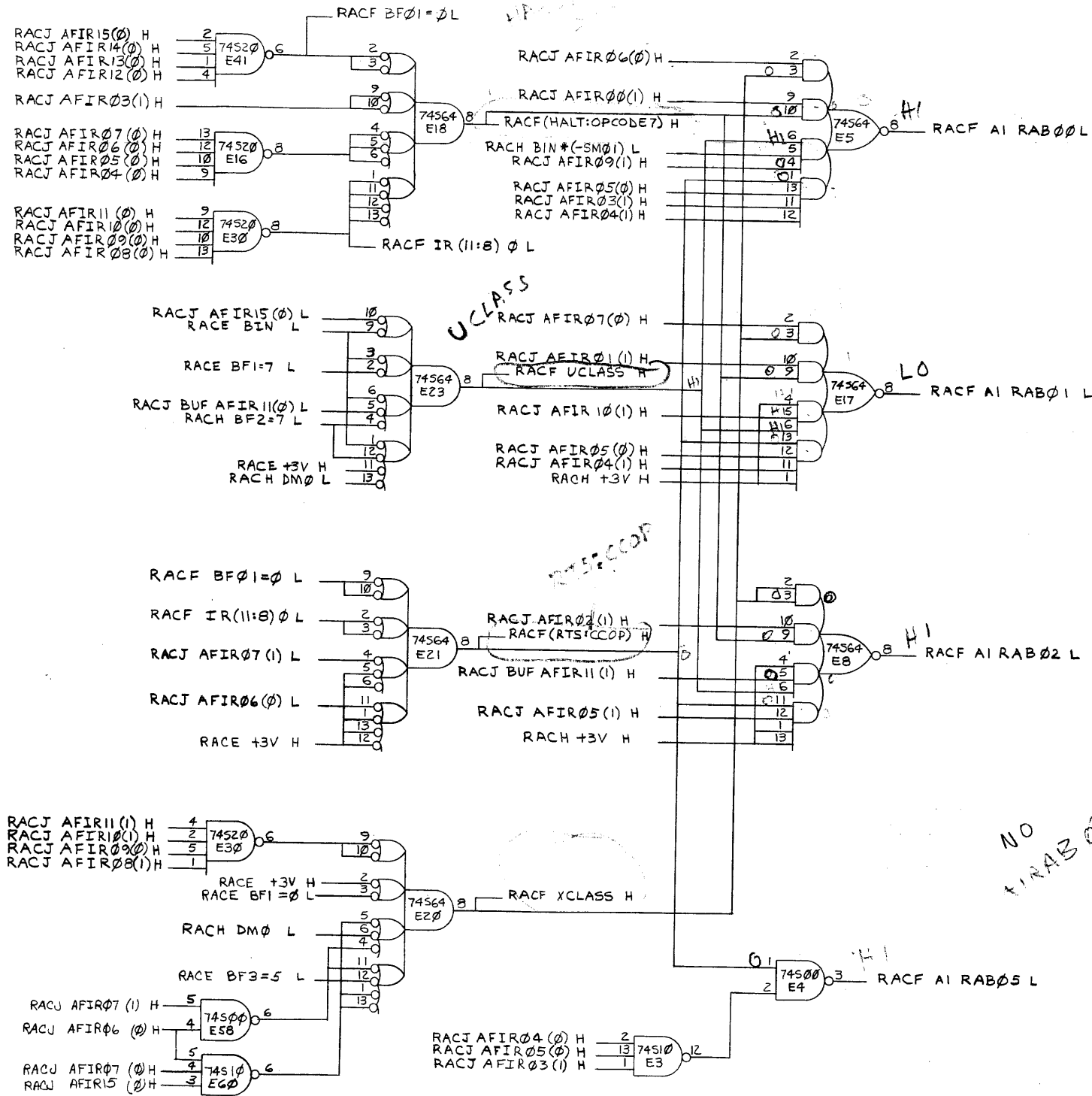
BUS TRANSFER

DIS BAST L = BAST H

| REV | CHG |
|-----|-----|
| | |
| | |
| | |
| | |

| FIRST USED ON OPTION/MODEL | | | | A-FORK LOGIC | | SLOT 9 | | |
|--|----------|-------------|----------|---|------------|--------|--|-----------|
| 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM | PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES: | | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | | | | |
| TOLERANCES | | CHKD | DATE | | | | | |
| DECIMALS | ANGLES | ENG | DATE | TITLE | | | | |
| .XXX - .008 | | PROJ. ENG. | DATE | ROM & ROM CONTROL | | | | |
| .XX - .02 | = 0° 30' | PROD. ENG. | DATE | | | | | |
| .X - .1 | | PROD. | DATE | | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | NEXT HIGHER ASSY. | | | | |
| MATERIAL | | | | B-DD-KB11-0 | | | | SIZE CODE |
| FINISH | | | | SCALE | | | | NUMBER |
| | | | | SHEET 8 OF 15 | | | | DIST. |

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$$BC OK = BR INSR * [IR08(1) * (TRUE1 + TRUE2) + IR08(0) * (TRUE1 + TRUE2)]$$

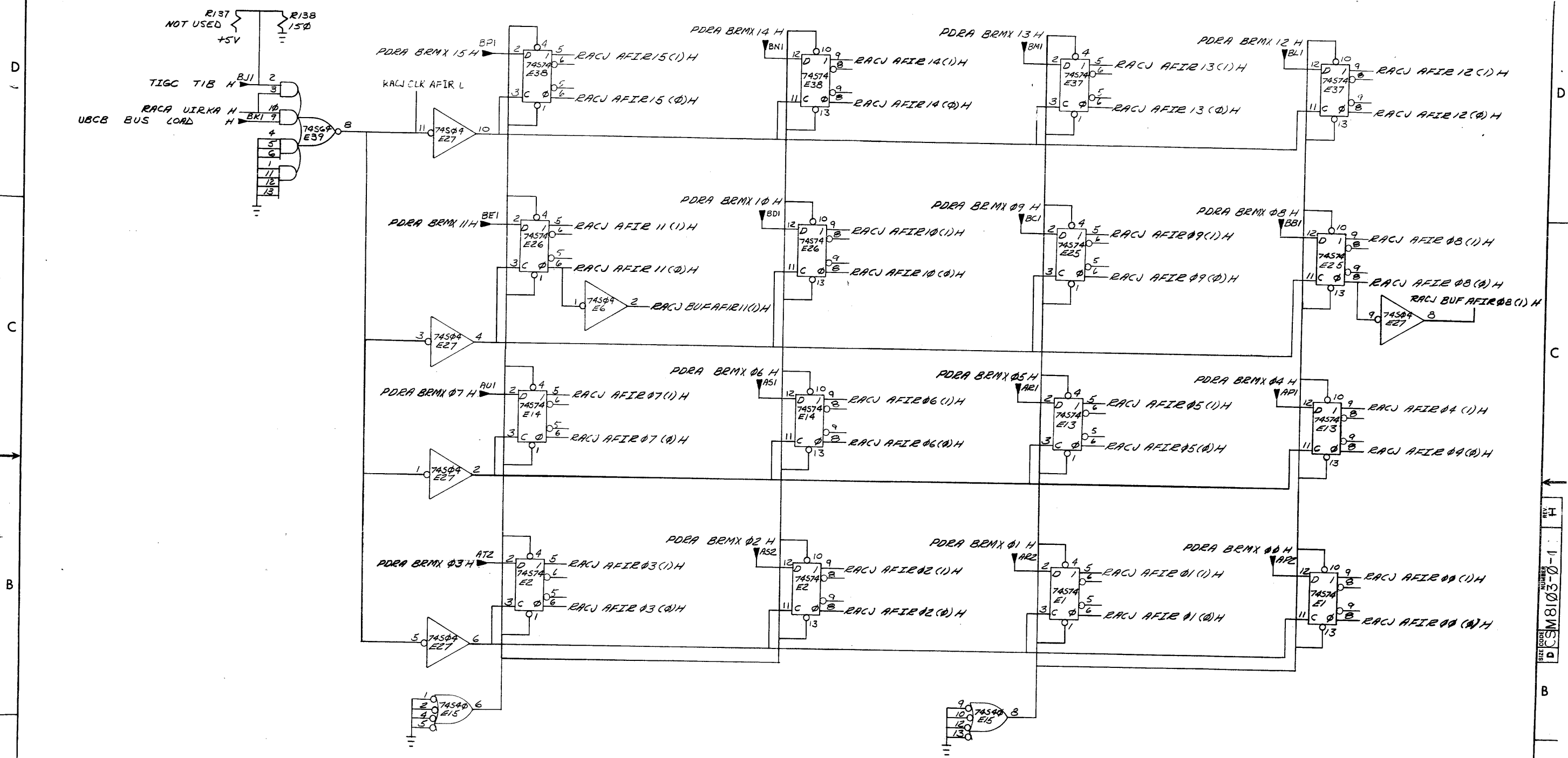
$$UCLASS = (MUL * ASHC) * DM0 + SOB + BIN$$

$$XCLASS = MARK + MTP + MFP * DM0$$

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------|--------------------------|-----------------|---------------------------------------|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. | | DRN Z. Carbery | DATE 7/18/71 | | |
| TOLERANCES | | CHKD. [Signature] | DATE 5/21/72 | | |
| DECIMALS | ANGLES | ENG. J. Jenkins | DATE 7-21-72 | TITLE ROM & ROM CONTROL | |
| .XXX = .005 | ±0° 30' | PROD. ENG. E. Erikson | DATE 7-21-72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | | PROD. [Signature] | DATE 7-21-72 | | |
| MATERIAL | | NEXT HIGHER ASSY. | | | |
| FINISH | | SCALE | | | |
| | | SHEET 7 OF 15 | | | |
| | | DIST. | | | |

| REV. | CHANGE NO. | CHK. |
|------|------------|------|
| | | |

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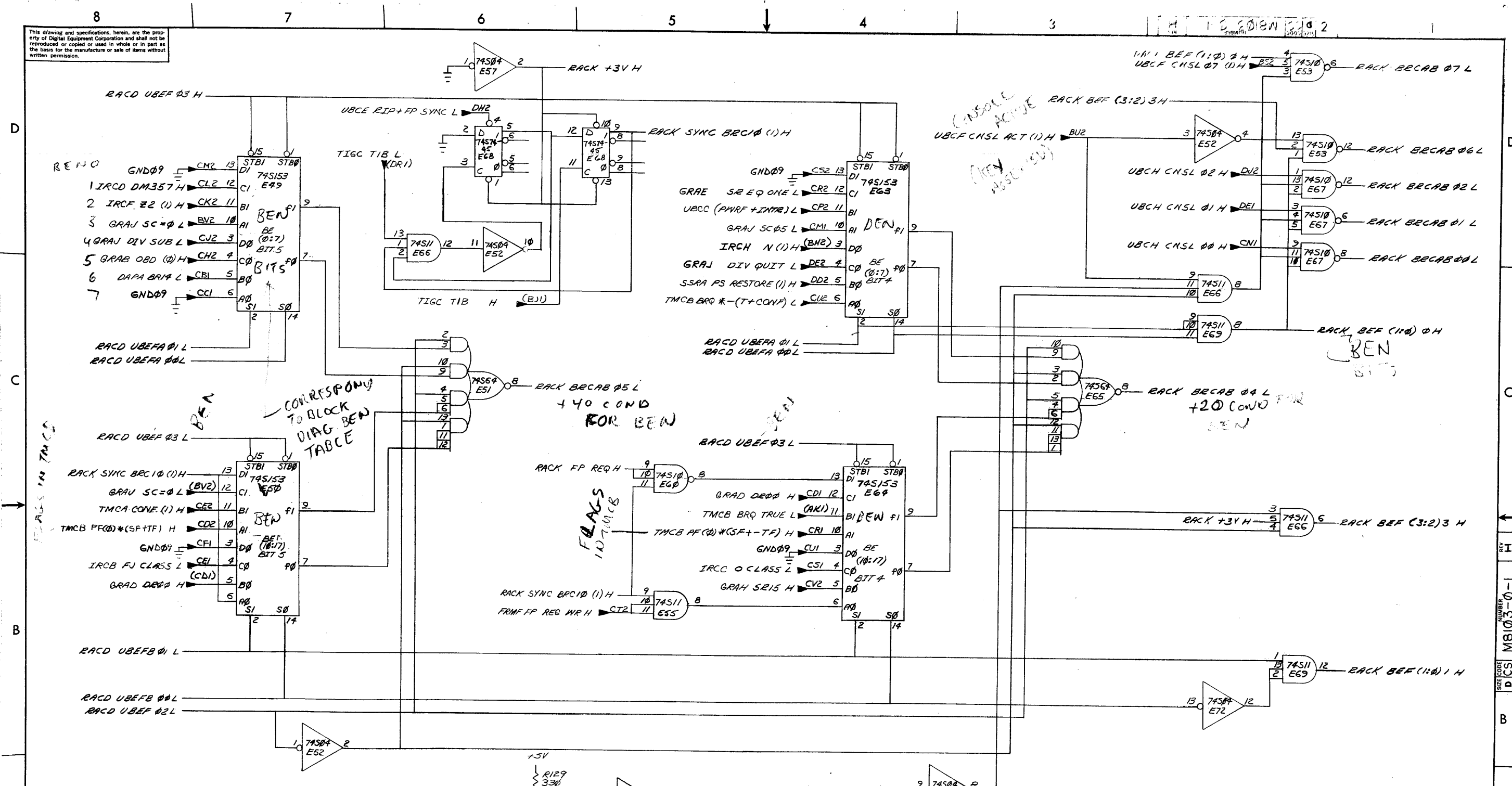
| | |
|-----|--|
| REV | |
| CHK | |
| CHG | |
| NO | |

DEC FORM NO 102-B

| | | | |
|--|----------------------------------|-----------------|--|
| INSTRUCTION REG. (A-FORK COPY) | | SLOT 9 | |
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. ITEM NO. |
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. <i>H. Jones</i> | DATE 7-7-71 | digital EQUIPMENT CORPORATION MAYFARLD, MASSACHUSETTS |
| DECIMALS | CHKD. <i>[Signature]</i> | DATE 5-21-72 | |
| ANGLES | ENG. <i>[Signature]</i> | DATE 3-21-72 | |
| .xxx = .006 .xx = .02 x = .1 | PROJ. ENG. <i>[Signature]</i> | DATE 3-21-72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD. <i>[Signature]</i> | DATE 3-30-72 | TITLE ROM & ROM CONTROL (RACJ) |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER (RACJ) |
| FINISH | SCALE | DCS: 8103-2-1 | REV. H |
| SHEET 9 OF 15 | | DIST. | |

SIZE CODE
 NUMBER
 DCS: 8103-2-1
 REV. H

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| REV. | CHG. | NO. |
|------|------|-----|
| | | |
| | | |

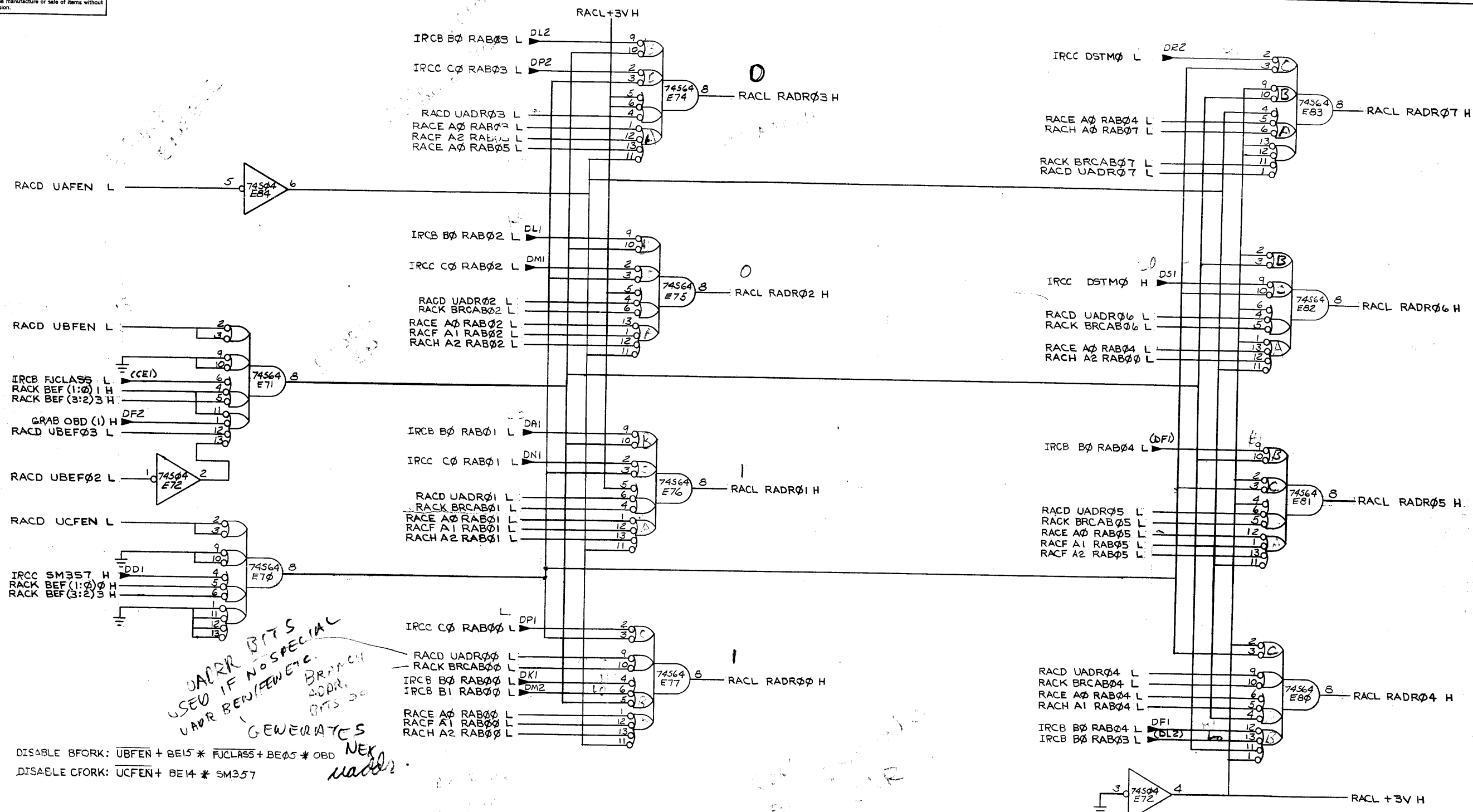
DEC FORM NO. DRD 102-B

| 74S153 | | |
|--------|----|--------|
| SI | S0 | OUTPUT |
| L | L | A=F |
| L | H | B=F |
| H | L | C=F |
| H | H | D=F |
| STB=L | X | X |
| STB=H | X | F=L |

| BRANCH CONDITIONS (ROM ADDRESS MODIFICATION) | | | | SLOT 9 | |
|--|-------------------|-------------|-------------------------------|-----------|------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. | |
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | |
| DECIMALS | ANGLES | DATE | PARTS LIST | | |
| .XXX = .005 | ±0° 30' | 7-5-71 | digital EQUIPMENT CORPORATION | | |
| .XX = .02 | | 3-21-72 | MAYNARD MASSACHUSETTS | | |
| .X = .1 | | 3-21-72 | TITLE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | 3-30-72 | ROM & ROM CONTROL | | |
| MATERIAL | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER | REV. |
| | B-DD-KB11-0 | | DCS | M8103-0-1 | H |
| FINISH | SCALE | | SHEET | 10 OF 15 | |
| | | | | | |

REV. I
NUMBER
M8103-0-1
SIZE CODE
DCS

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*UADR BITS
 USED IF NO SPECIAL
 UADR BENEFIT ETC.
 GENERATES
 NEXT
 ADDR.*

*IRCC SM357
 BRANCH
 ADDR.
 BITS DO
 NOT
 GENERATE
 NEXT
 ADDR.*

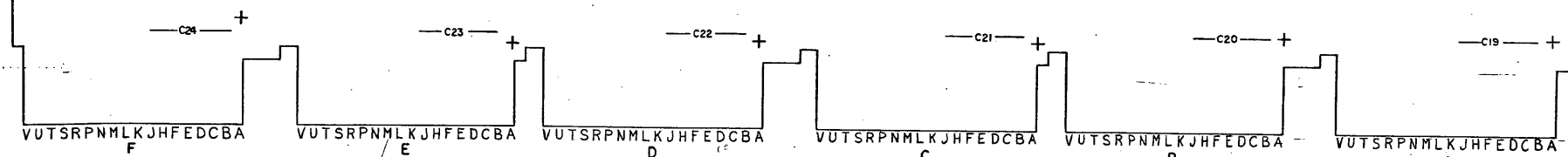
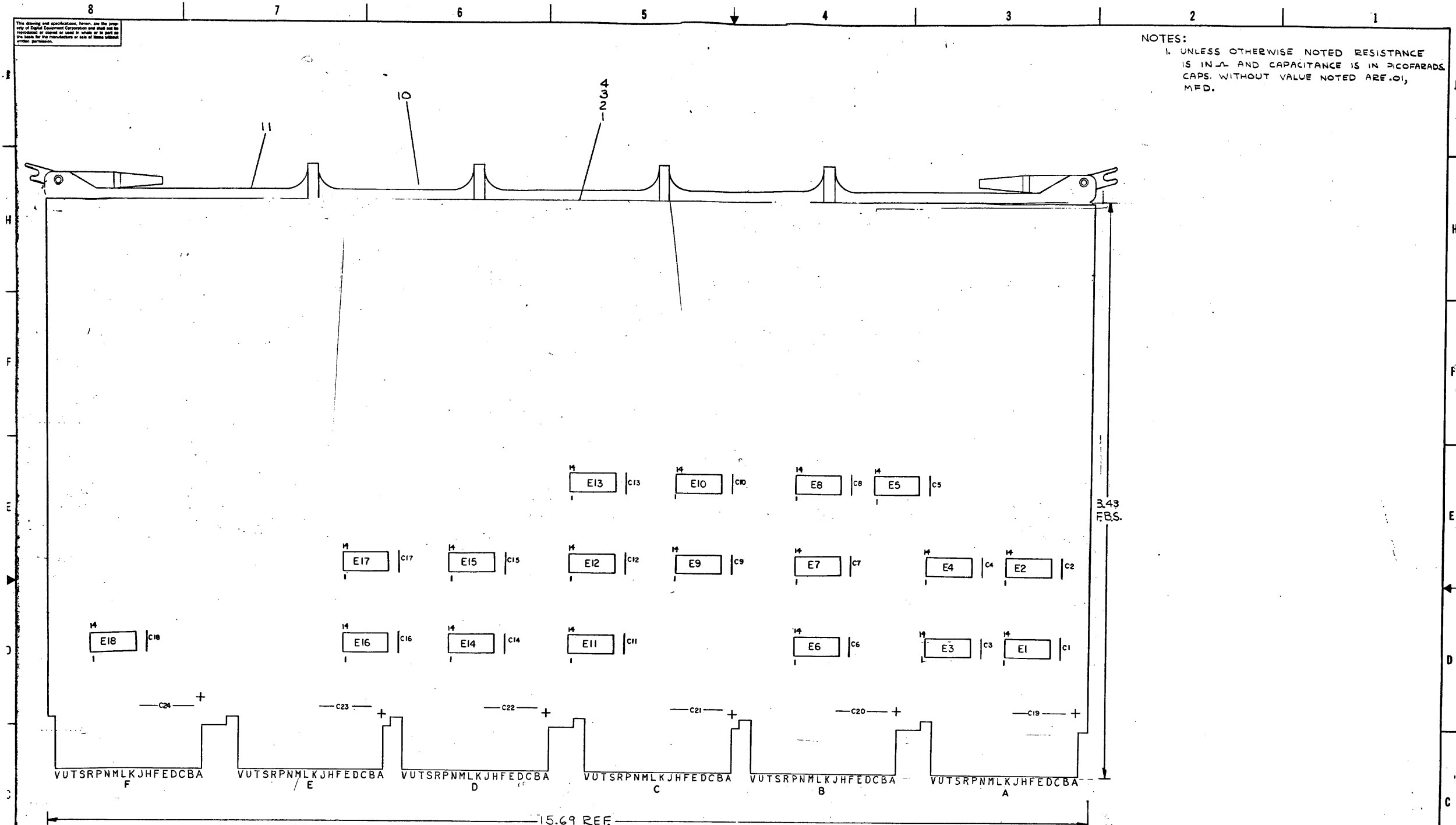
DISABLE BFORK: $\overline{UBFEN} + BE15 * \overline{FJCLASS} + BE05 * \overline{OBD}$
 DISABLE CFORK: $\overline{UCFEN} + BE14 * \overline{SM357}$

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------|--|-------------|-------------------|-----------|-----|------|--|-----|------|-----|------|----------|------|--|--|-------|------|-------|--|----------|--|-------------------|--|-------------------|--|--------|--|-------------|--|-----------|--------|--|--|-------|--|-----|-----------|--|--|-------|--|----|----|--|--|-------|--|--|--|
| 11/45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DECIMALS | ANGLES | PARTS LIST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| .XXX = .005 | ±0° 30' | <table border="1"> <tr> <td>DRN</td> <td>DATE</td> <td rowspan="4"> </td> </tr> <tr> <td>CHK</td> <td>DATE</td> </tr> <tr> <td>ENG</td> <td>DATE</td> </tr> <tr> <td>PROL ENG</td> <td>DATE</td> </tr> <tr> <td colspan="2">REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY</td> <td>PROD.</td> <td>DATE</td> <td colspan="2">TITLE</td> </tr> <tr> <td colspan="2">MATERIAL</td> <td colspan="2">NEXT HIGHER ASSY.</td> <td colspan="2">ROM & ROM CONTROL</td> </tr> <tr> <td colspan="2">FINISH</td> <td colspan="2">B-DD-KB11-0</td> <td>SIZE CODE</td> <td>NUMBER</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">SCALE</td> <td>DCS</td> <td>M8103-0-1</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">SHEET</td> <td>OF</td> <td>15</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">DIST.</td> <td></td> <td></td> </tr> </table> | | | | DRN | DATE | | CHK | DATE | ENG | DATE | PROL ENG | DATE | REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. | DATE | TITLE | | MATERIAL | | NEXT HIGHER ASSY. | | ROM & ROM CONTROL | | FINISH | | B-DD-KB11-0 | | SIZE CODE | NUMBER | | | SCALE | | DCS | M8103-0-1 | | | SHEET | | OF | 15 | | | DIST. | | | |
| DRN | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHK | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENG | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PROL ENG | DATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. | DATE | TITLE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | ROM & ROM CONTROL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FINISH | | B-DD-KB11-0 | | SIZE CODE | NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SCALE | | DCS | M8103-0-1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SHEET | | OF | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | DIST. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|-----|--|
| REV | |
| CHG | |
| REV | |
| CHG | |

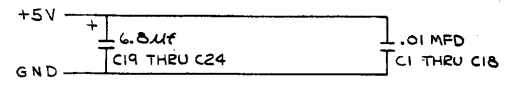
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NOTES:
 1. UNLESS OTHERWISE NOTED RESISTANCE IS IN OHMS AND CAPACITANCE IS IN MICROFARADS. CAPS. WITHOUT VALUE NOTED ARE .01 MFD.



AAZ, AVI, BA2, BV1,
 CAZ, CVI, DA2, DV1,
 EAZ, EV1, FAZ, FV1

AC2, AN2, AT1
 BC2, BN2, BT1
 CC2, CN2, CT1
 DC2, DN2, DT1
 EC2, EN2, ET1
 FC2



| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|--------------------------------|----------------------------------|----------------|----------|
| 1 | | HANDLE, MODULE | E-PS-1210711-2 | 11 |
| 12 | | EYELET | 9006732 | 10 |
| 6 | E1, E2, E3, E10, E14, E17 | IC DEC 74511 | 1910537 | 9 |
| 5 | E6, E7, E9, E11, E12 | IC DEC 8881 | 1909705 | 8 |
| 7 | E3, E4, E5, E13, E15, E16, E18 | IC DEC 7404 | 1909686 | 7 |
| 18 | C1 THRU C18 | CAPACITOR .01MFD, 100V, 20% DISC | 1001610 | 6 |
| 6 | C19 THRU C24 | CAPACITOR .01MFD, 35V, 10% | 1005306 | 5 |
| 1 | | ETCHED CIRCUIT BOARD | 5009950 | 4 |
| REF | | MODULE ECO HISTORY | B-MH-M816-0-4 | 3 |
| REF | | ASSY/DRILLING HOLE LAYOUT | E-AM-M816-0-5 | 2 |
| REF | | X-Y COORDINATE HOLE LOCATION | KCO-M816-0-4 | 1 |

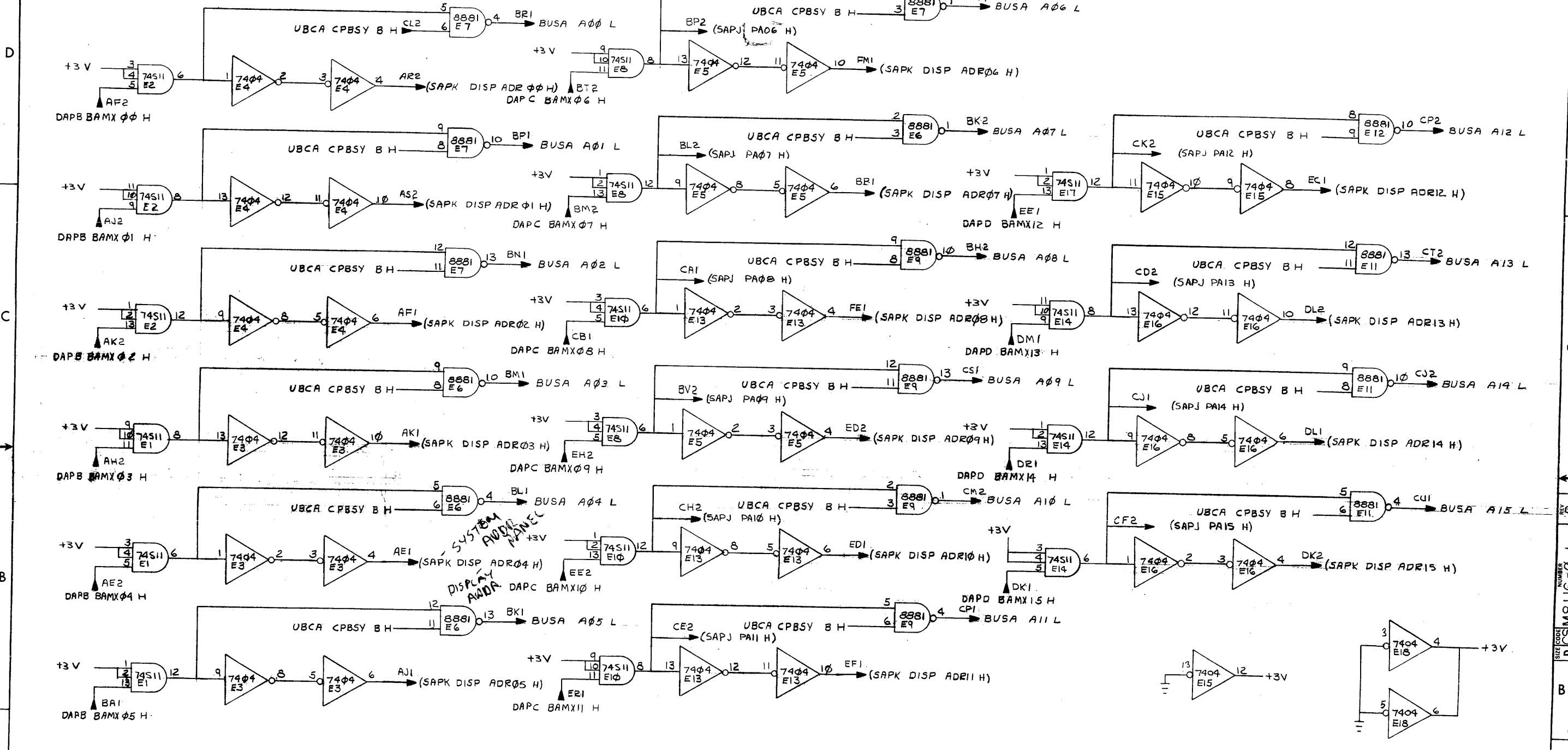
| IC TYPE | GND | +5V | ITEM NO. | AWG | FROM PT | TO PT |
|---------|-----|-----|----------|-----|---------|-------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

REVISIONS

| REV | DATE | DESCRIPTION |
|-----|----------|----------------|
| 1 | 11/15/72 | INITIAL DESIGN |
| 2 | 1/22/73 | REVISION |

DATE: 1/22/73
 DRAWN: R.C. GRAY
 CHECKED: R.C. GRAY
 TITLE: SYSTEM ADDRESS BUFFERS
 SCALE: 2:1
 SHEET: 2 OF 3

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ADDRESS LINES 0-15 SLOT 14

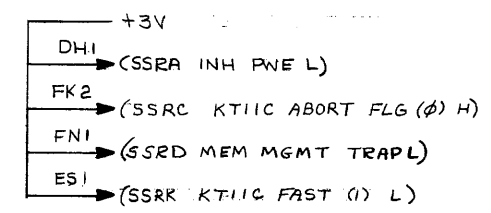
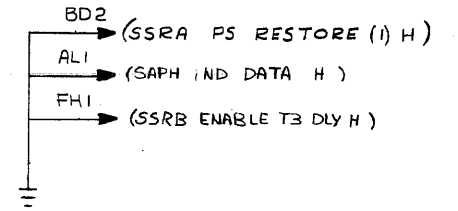
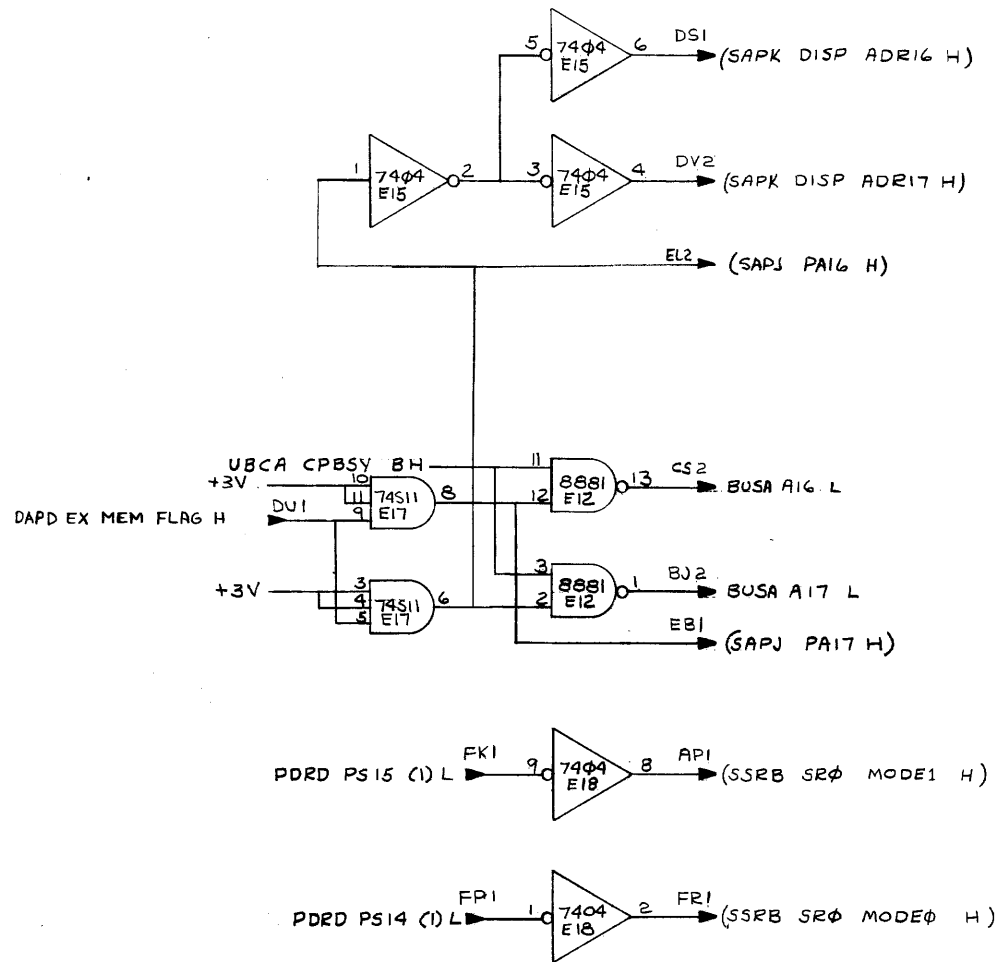
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------------------------|------------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN <i>[Signature]</i> | DATE 11-18-71 | digital EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small> | |
| DECIMALS | CHKD <i>[Signature]</i> | DATE 3/2/72 | | |
| .XXX - .006 | ENG <i>[Signature]</i> | DATE 3/2/72 | | |
| .XX - .02 | PRD <i>[Signature]</i> | DATE 3/2/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD <i>[Signature]</i> | DATE 3/15/72 | TITLE SYSTEM ADDRESS BUFFERS (S JBA) | |
| MATERIAL | NEXT HIGHER ASSY | | SIZE CODE | NUMBER |
| FINISH | SCALE | | D CS M8116-0-1 | REV. B |
| | SHEET 2 OF 3 | | DIST. | |

BRUNING 40-522 151440
 DEC 10PM NO
 ORD 102-B

SIZE CODE D CS M8116-0-1
 NUMBER 116-0-1
 REV. B

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DCS M8116-0-1 2



MISC. SIGNALS AND ADRS. LINES 16 & 17

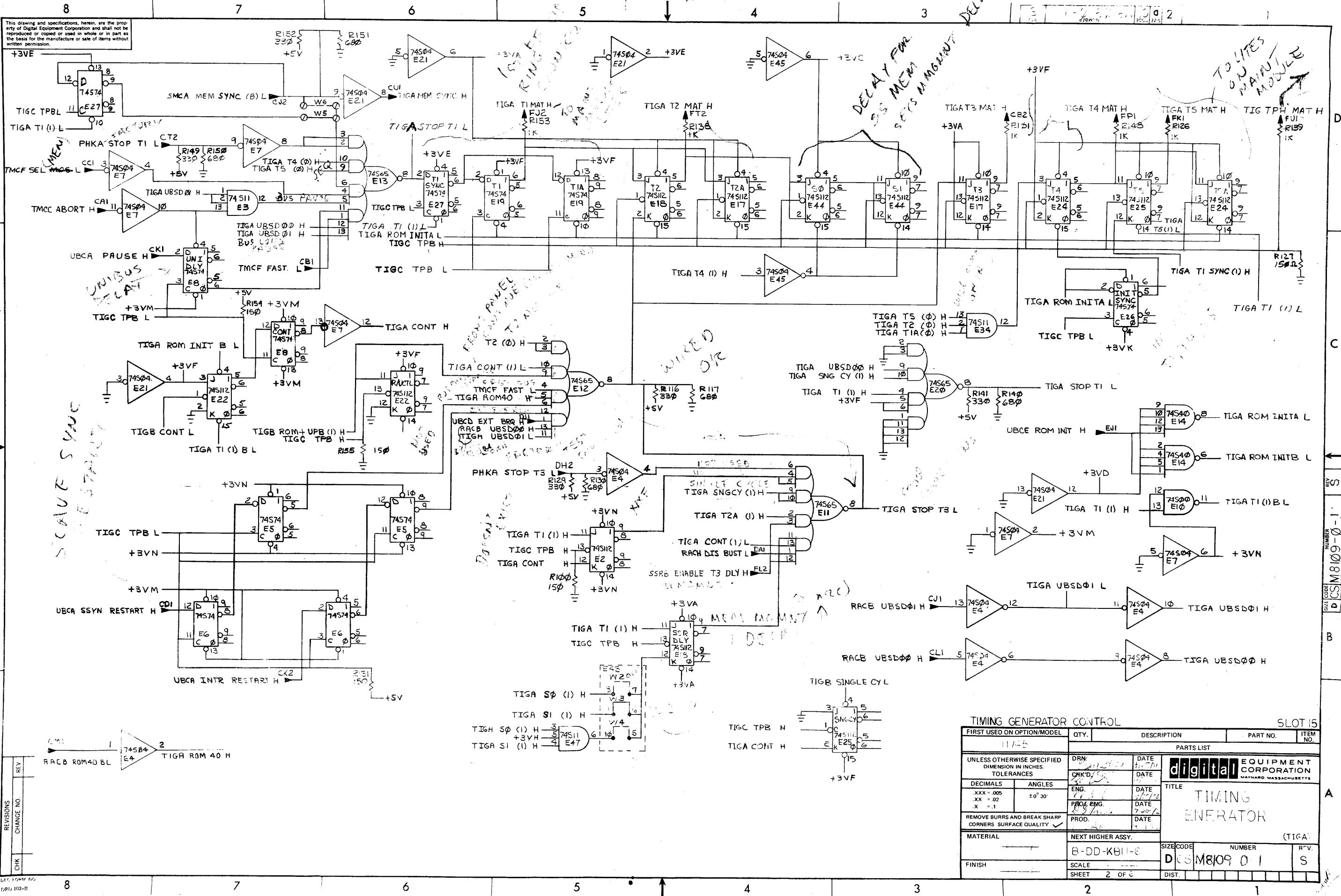
SLOT 14

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------------------------------|------------------|---|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | DRN <i>K. Davis</i> | DATE 11-18-71 | TITLE SYSTEM ADDRESS BUFFERS (SJB B) | |
| TOLERANCES | CHK'D <i>[Signature]</i> | DATE 3/2/72 | | |
| DECIMALS | ENG. <i>R. C. Gray</i> | DATE 3/2/72 | | |
| ANGLES | PROJ. ENG. <i>R. C. Gray</i> | DATE 2/1/72 | | |
| .XXX = .005 .XX = .02 .X = .1 | PRD. <i>[Signature]</i> | DATE 3/15/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| MATERIAL | B-DD-11/45-0 | | DCS M8116-0-1 | REV. B |
| FINISH | SCALE | SHEET 3 OF 3 | | |

BRUNING 40-322 15#40
 DEC FORM NO DRD 102-B

REV B
 NUMBER
 DCS M8116-0-1

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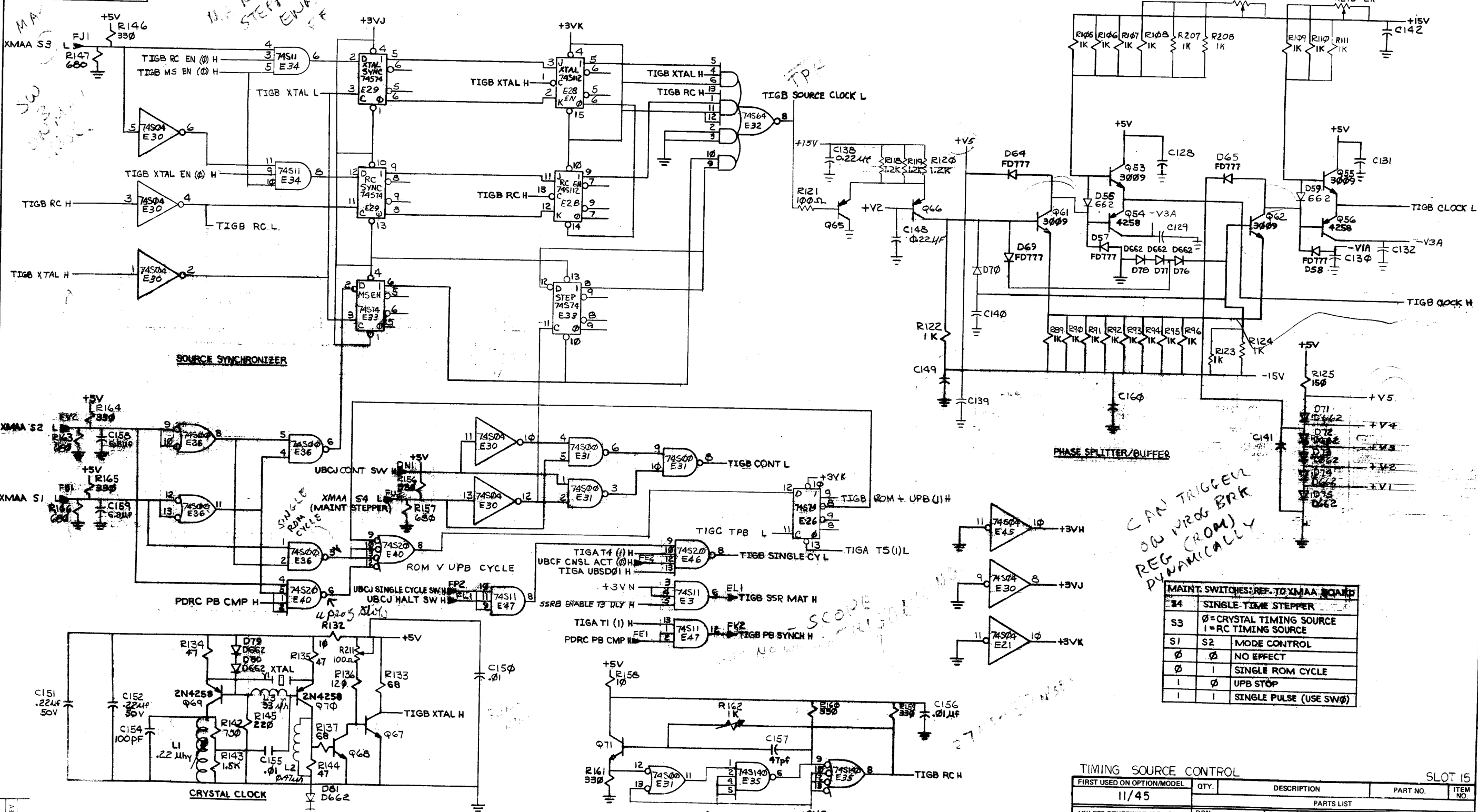


| TIMING GENERATOR CONTROL | | | | SLOT 15 | | | | | | | | | | | | |
|--|---------|-------------------|---|---------------|------|------|------|--|--------|------|-------|------|-------------|------|--------|------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. | | | | | | | | | | | | |
| 11445 | | | | | | | | | | | | | | | | |
| PARTS LIST | | | | | | | | | | | | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | <table border="1"> <tr> <td>DRM:</td> <td>DATE</td> <td rowspan="5"> </td> </tr> <tr> <td>CHK'D:</td> <td>DATE</td> </tr> <tr> <td>ENG.:</td> <td>DATE</td> </tr> <tr> <td>PROC. ENG.:</td> <td>DATE</td> </tr> <tr> <td>PROD.:</td> <td>DATE</td> </tr> </table> | | | DRM: | DATE | | CHK'D: | DATE | ENG.: | DATE | PROC. ENG.: | DATE | PROD.: | DATE |
| DRM: | DATE | | | | | | | | | | | | | | | |
| CHK'D: | DATE | | | | | | | | | | | | | | | |
| ENG.: | DATE | | | | | | | | | | | | | | | |
| PROC. ENG.: | DATE | | | | | | | | | | | | | | | |
| PROD.: | DATE | | | | | | | | | | | | | | | |
| DECIMALS | ANGLES | TITLE | | | | | | | | | | | | | | |
| .xxx = .005 | ±0° 30' | TIMING GENERATOR | | | | | | | | | | | | | | |
| .xx = .02 | | MATERIAL | | | | | | | | | | | | | | |
| .x = .1 | | NEXT HIGHER ASSY. | | | | | | | | | | | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | | | | | | | | | | | | |
| FINISH | | | SIZE CODE | NUMBER | REV. | | | | | | | | | | | |
| | | | B-DD-KB11-0 | DCS M8109 0 1 | S | | | | | | | | | | | |
| SHEET 2 OF 6 | | | DIST. | | | | | | | | | | | | | |

| | | | |
|-----|-----|------|----|
| REV | NO. | DATE | BY |
| | | | |
| | | | |
| | | | |

REV 5
NUMBER
CSM8109-0-1
SIZE CODE
D

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MAINT STEPPER
 ENABLE

TPP

CAN TRIGGER
 ON PROG BRK
 REG (ROM)
 DYNAMICALLY

SCOPE
 ORIGINAL

| MAINT. SWITCHES; REF. TO XMAA BOARD | | |
|-------------------------------------|---|------------------------|
| S4 | SINGLE TIME STEPPER | |
| S3 | 0 = CRYSTAL TIMING SOURCE 1 = RC TIMING SOURCE | |
| S1 | S2 | MODE CONTROL |
| 0 | 0 | NO EFFECT |
| 0 | 1 | SINGLE ROM CYCLE |
| 1 | 0 | UPB STOP |
| 1 | 1 | SINGLE PULSE (USE SW0) |

TIMING SOURCE CONTROL

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|--------|--|-----------|-----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX = .005 | ±0°30' | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | | |
| .XX = .02 | | TITLE TIMING GENERATOR | | |
| .X = .1 | | REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | B-DD-KB11-0 | | |
| | | SCALE | SIZE CODE | NUMBER |
| | | SHEET 3 OF 6 | DCS | M8109-0-1 |
| | | DIST. | | REV. S |

| REV | CHANGE NO. |
|-----|------------|
| | |

DEC FORM NO. DRD 102-B

NUMBER 0-1
 REV S

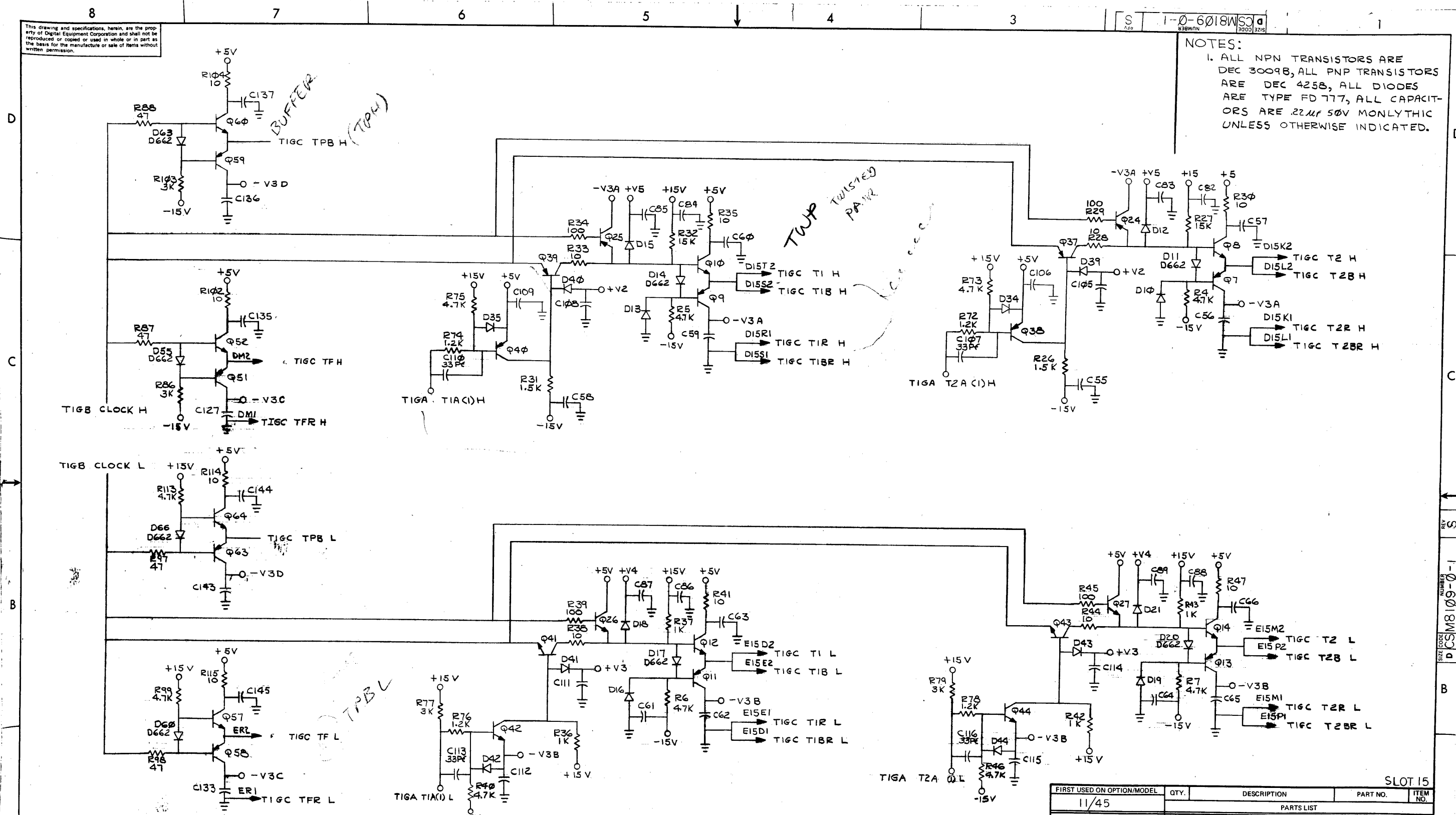
B

A

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1-0-6018WS

NOTES:
 1. ALL NPN TRANSISTORS ARE DEC 3009B, ALL PNP TRANSISTORS ARE DEC 425B, ALL DIODES ARE TYPE FD 777, ALL CAPACITORS ARE 22UF 50V MONLYTHIC UNLESS OTHERWISE INDICATED.



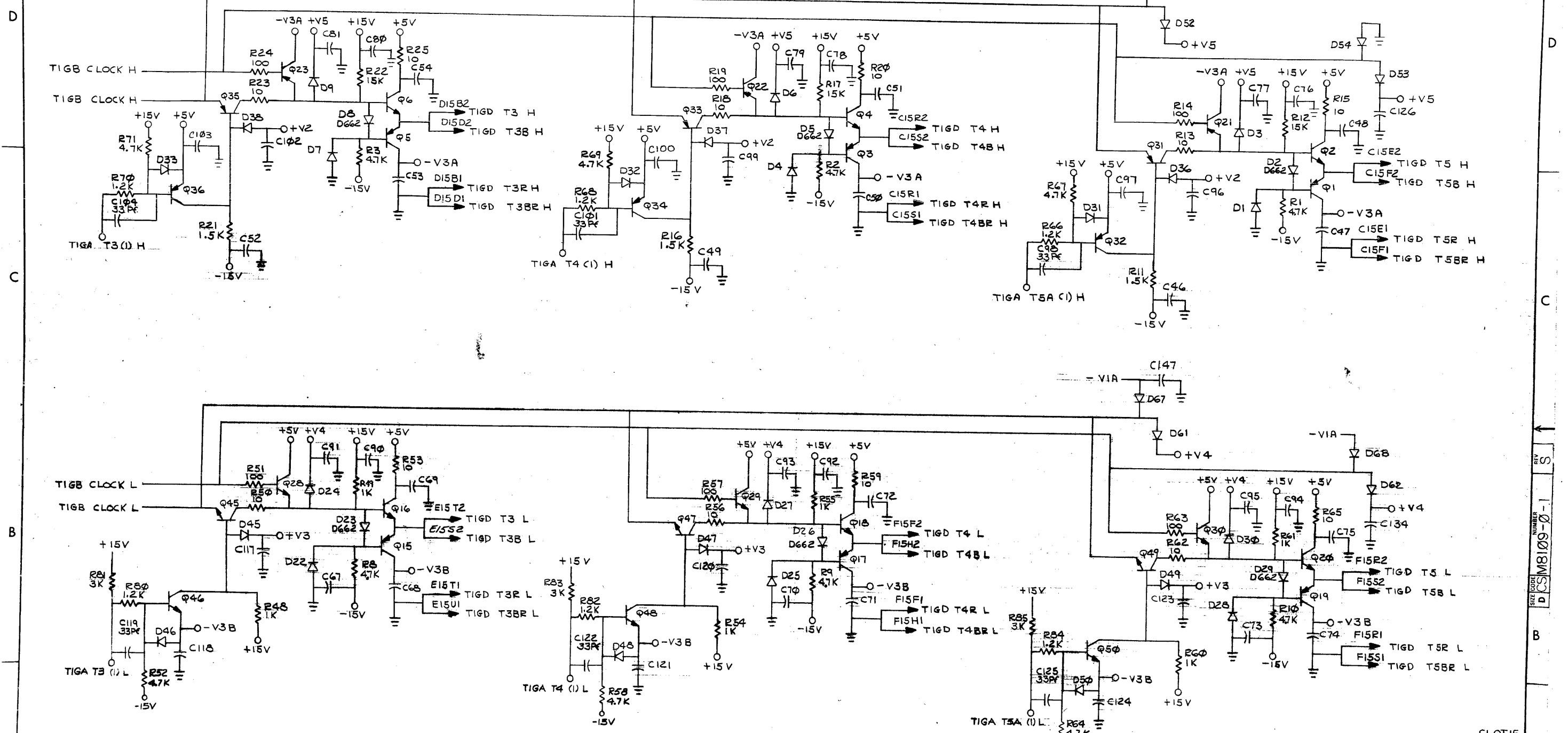
| | |
|------------|--|
| REV | |
| CHANGE NO. | |
| CHK | |
| REVISIONS | |

| | | | | |
|--|-------------------|------------------------|----------|----------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | DATE | | |
| .XXX = .005 | ±0° 30' | 2-25-72 | | |
| .XX = .02 | | DATE | | |
| .X = .1 | | 4-20-72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE | | |
| | | 4-21-72 | | |
| MATERIAL | NEXT HIGHER ASSY. | TITLE | | |
| FINISH | B-DD-KB11-0 | TIMING GENERATOR (TIG) | | |
| | SCALE | SIZE CODE | NUMBER | REV. |
| | SHEET 4 OF 6 | DCS M8109-0-1 | | S |

REV S
 NUMBER DCS M8109-0-1
 SIZE CODE B

SLOT 15

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NOTE:
 1. ALL NPN TRANSISTORS ARE DEC 3009B,
 ALL PNP TRANSISTORS ARE DEC 425B,
 ALL DIODES ARE TYPE FD777 ALL CAPACITORS
 ARE .22 UF MONYTHIC UNLESS OTHERWISE
 INDICATED.

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|--|---------------------|-----------------|---|----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN K. D. | DATE 3-1-72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS ANGLES | | DATE 4/20/72 | DATE 4/20/72 | | |
| .XXX ± .005 ± 0° 30' | | ENG K. D. | DATE 4/20/72 | TITLE TIMING GENERATOR (TIGD) | |
| .XX ± .02 | | PROJ. ENG. K. D. | DATE 4/20/72 | | |
| .X ± .1 | | PROD. K. D. | DATE 4-21-72 | NUMBER DCSM8109-0-1 REV. S | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | SIZE CODE | |
| FINISH | | B-DD-KB11-0 | | NUMBER | |
| | | SCALE | | DIST. | |
| | | SHEET 5 OF 6 | | | |

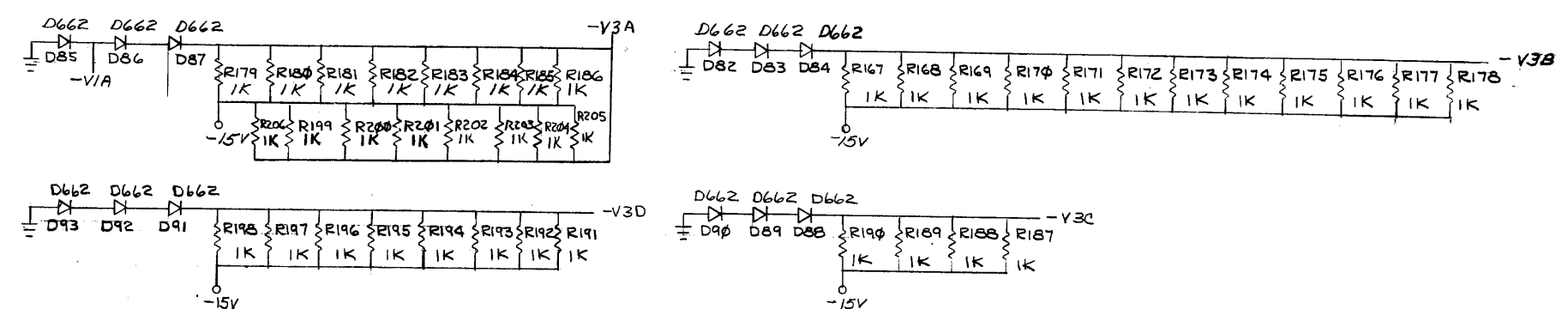
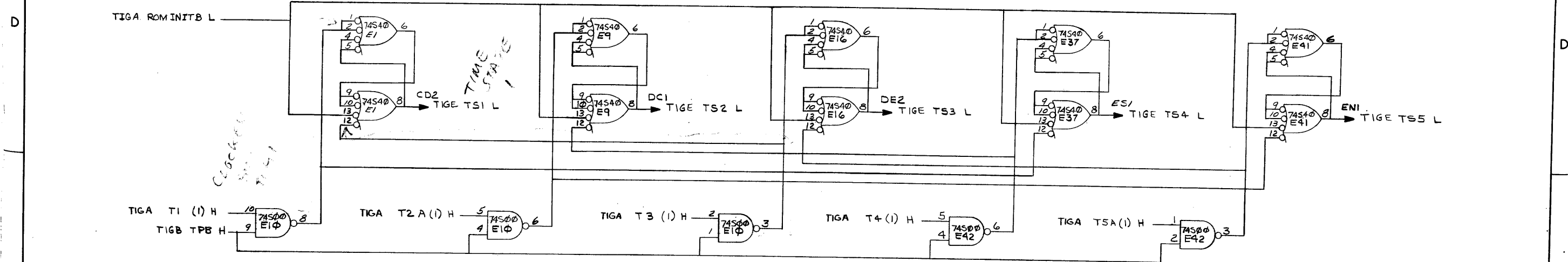
BRUNING 40-522 158-C
 125 FORM NO
 DRD 102-B

REV S
 NUMBER DCSM8109-0-1
 SIZE CODE

A

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S 1-0-6018W SJ a 2



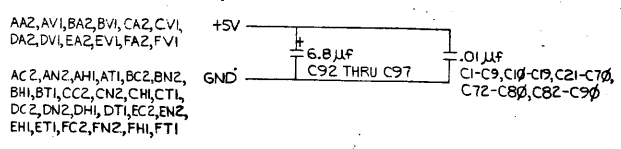
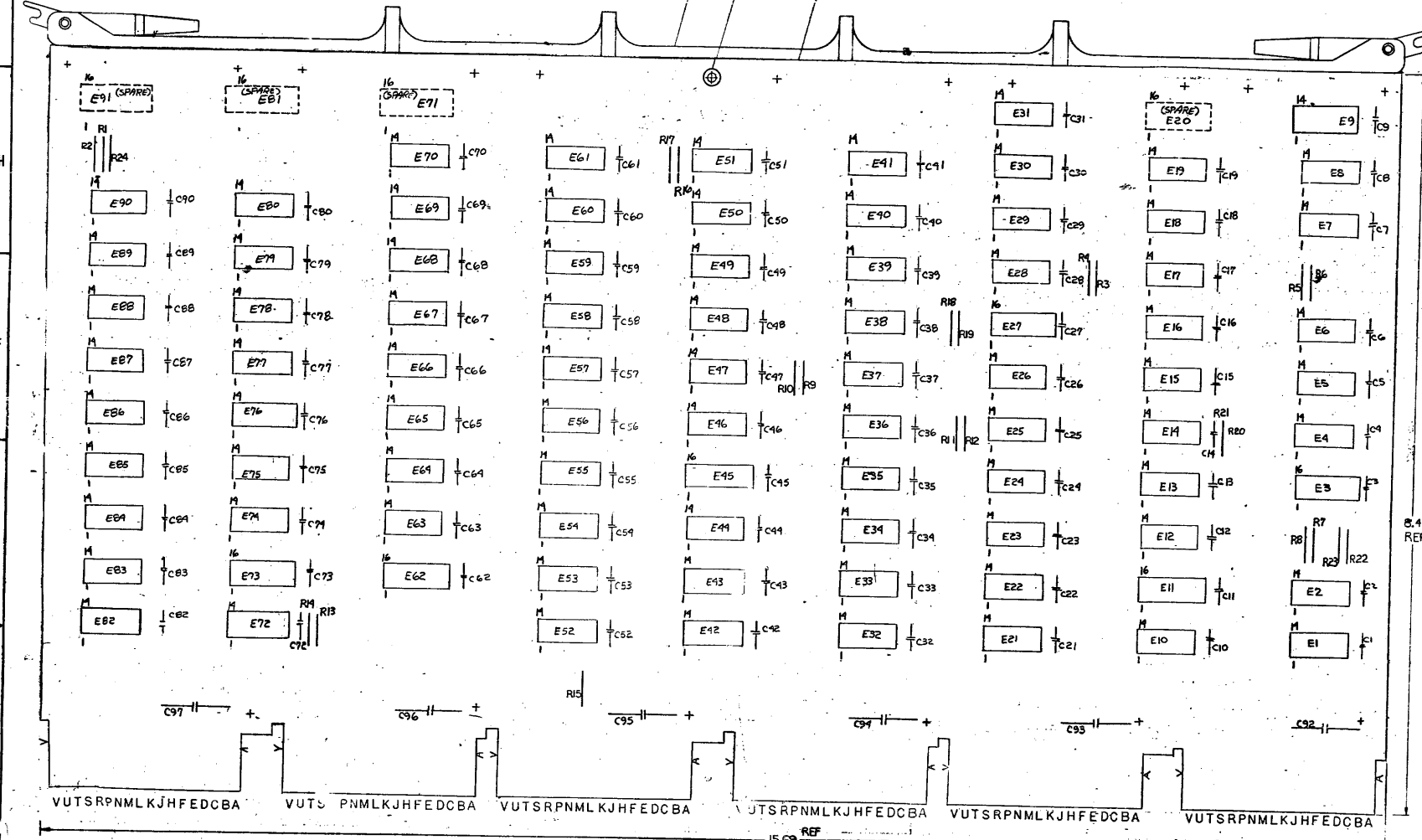
| TIMING STATE DRIVERS | | SLOT 15 | |
|--|-------------------|---|--|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. ITEM NO. |
| 11/45 | | | |
| PARTS LIST | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN <i>L. Carberry</i> DATE 8-25-71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TIMING GENERATOR (TIGE) |
| DECIMALS | ANGLES | CHKD <i>J. & S. Stan</i> DATE 1/20/72 | |
| .XXX = .005 | ±0° 30' | ENG <i>R. H. Holt</i> DATE 1/20/72 | |
| .XX = .02 | | PRQJ. ENG. <i>H. D. Vande</i> DATE 4-20-72 | |
| .X = .1 | | PROD. <i>John J. ...</i> DATE 4-21-72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | |
| MATERIAL | NEXT HIGHER ASSY. | | |
| FINISH | B-DD-KB11-0 | SIZE CODE | NUMBER |
| | SCALE | D CS | M8109-0-1 |
| | SHEET 6 OF 6 | DIST. | REV. S |

REVISIONS
CHANGE NO. REV.
CHK

REV. S
NUMBER M8109-0-1
SIZE CODE D CS

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NOTE:
1. UNLESS OTHERWISE NOTED RESISTANCE IS IN Ω , CAPACITANCE IS IN PICOFARADS, CAPS WITHOUT VALUE NOTED ARE .01 MFD.



| IC TYPE | GND | +5V |
|------------|-----|-----|
| DEC 745174 | B | 16 |
| DEC 74155 | B | 16 |
| DEC 745153 | B | 16 |
| DEC 745112 | B | 16 |
| DEC 8888 | B | |

| IC PIN LOCATIONS | JUMPER LIST |
|------------------|-------------|
| IC NO. | AWG |
| FROM PT | TO PT |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|---|-----------------------------------|---------------|----------|
| 1 | R24 | RESISTOR 10K, 1/4W, 5% | 1300479 | 34 |
| 1 | E8 | DEC IC 74156 | 1910256 | 33 |
| 2 | E24, E59 | DEC IC 8888 | 1910649 | 32 |
| 3 | E45, E62, E73 | DEC IC 745174 | 1910550 | 31 |
| 1 | E11 | DEC IC 745153 | 1910547 | 30 |
| 3 | E8A, E96, E98 | DEC IC 745148 | 1910546 | 29 |
| 1 | E27 | DEC IC 745112 | 1910545 | 28 |
| 5 | E17, E48, E41, E54, E37 | DEC IC 745174 | 1910544 | 27 |
| 3 | E16, E25, E28 | DEC IC 745164 | 1910542 | 26 |
| 11 | E8, E36, E39, E45, E58, E55, E64, E65, E76, E75, E89 | DEC IC 745228 | 1910539 | 25 |
| 17 | E5, E4, E21, E29, E31, E34, E35, E42, E47, E49, E66, E67, E72, E76, E77, E78, E88 | DEC IC 745111 | 1910537 | 24 |
| 5 | E19, E32, E44, E51, E83 | DEC IC 745188 | 1910536 | 23 |
| 12 | E4, E18, E22, E26, E33, E36, E46, E57, E53, E74, E85, E93 | DEC IC 74584 | 1910534 | 22 |
| 8 | E16, E23, E43, E68, E79, E81 | DEC IC 74588 | 1910532 | 21 |
| 1 | E2 | DEC IC 885A | 1909713 | 20 |
| 1 | E18 | DEC IC 380A | 1909485 | 19 |
| 1 | E7 | DEC IC 74H11 | 1909267 | 18 |
| 5 | E5, E52, E58, E61, E84 | DEC IC 74H38 | 1909060 | 17 |
| 7 | E12, E13, E55, E68, E69, E88, E82 | DEC IC 74H38 | 1909059 | 16 |
| 12 | EYELET | | 9006732 | 15 |
| 2 | R2, R14 | RESISTOR, 680 Ω , 1/4W, 5% | 1301424 | 14 |
| 1 | R7 | RESISTOR, 180 Ω , 1/4W, 5% | 1301322 | 13 |
| 3 | R15 THRU R17 | RESISTOR, 1K, 1/4W, 5% | 1300365 | 12 |
| 1 | R8 | RESISTOR, 390 Ω , 1/4W, 5% | 1300309 | 11 |
| 2 | R1, R18 | RESISTOR, 330 Ω , 1/4W, 5% | 1300295 | 10 |
| 1 | R21 | RESISTOR, 150 Ω , 1/4W, 5% | 1300250 | 9 |
| 4 | R4, R6, R18, R23 | RESISTOR, 120 Ω , 1/4W, 5% | 1300247 | 8 |
| 87 | C1-C9, C18-C19, C21-C78, C72-C86, C82-C97 | CAP. .01uF, 100V, 20% DISC | 1001610 | 7 |
| 6 | C92 THRU C97 | CAP. 6.8 uF, 35V, 10% | 1005306 | 6 |
| 1 | | HANDLE, MODULE | 121011-2-0 | 5 |
| 1 | | ETCHED CIRCUIT BOARD | 5009803 | 4 |
| REF | | ECO MODULE HISTORY | B-M-8105-5-3 | 3 |
| REF | | ASSY/DRILLING HOLE LAYOUT | F-M-8105-5-5 | 2 |
| REF | | X-Y COORDINATE HOLE LOCATION | K-CO-8105-5-4 | 1 |

DEC 745174 B 16
 DEC 74155 B 16
 DEC 745153 B 16
 DEC 745112 B 16
 DEC 8888 B 8

IC TYPE GND +5V
 GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.

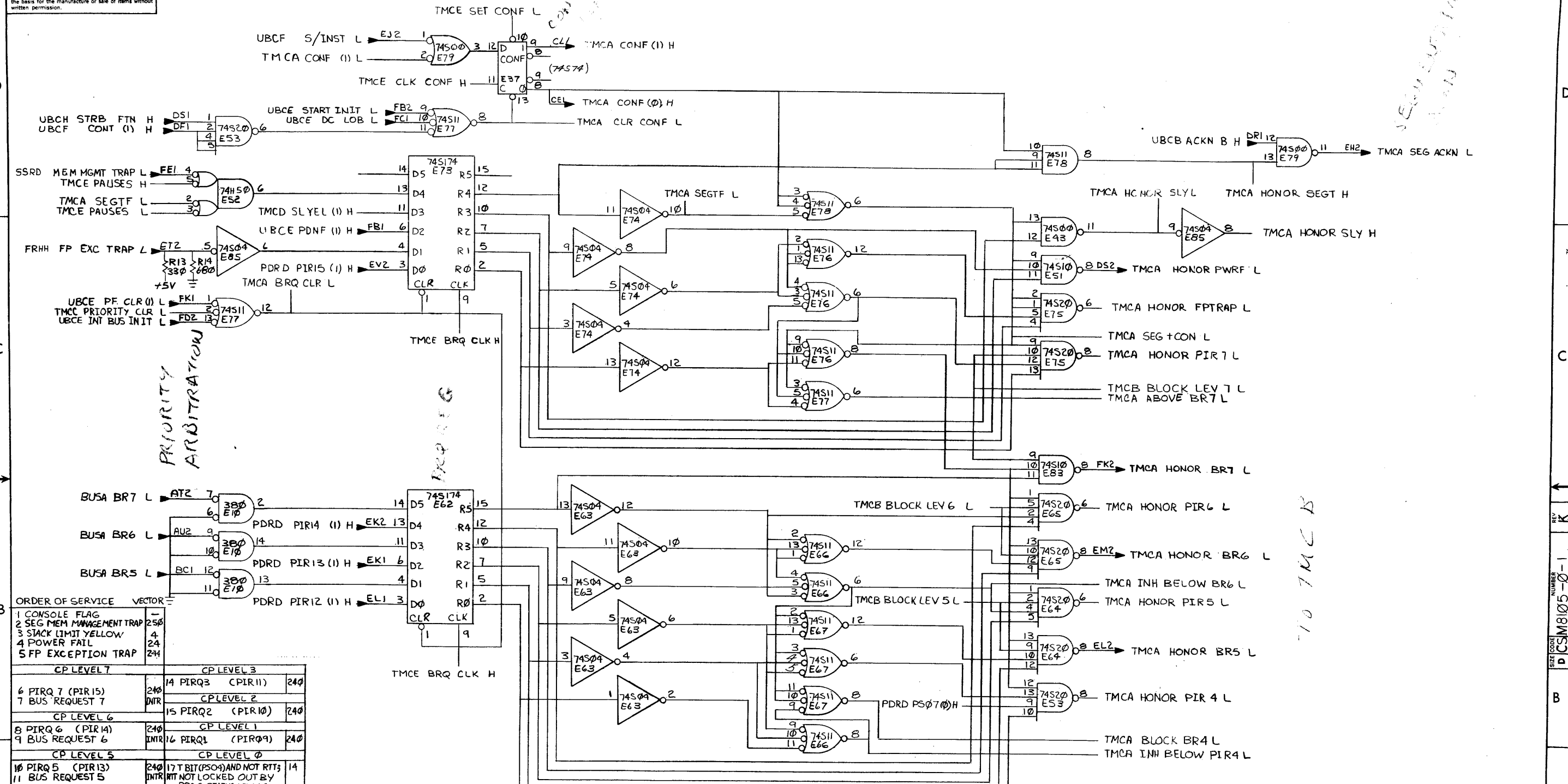
ITEM NO. AWG FROM PT TO PT
 IC PIN LOCATIONS JUMPER LIST

ORIGINAL A
 CHG CHANGE NO. REV
 DATE TIME
 BY NAME

DEC NO. EIA NO. DEC NO. EIA NO.
 SEMICONDUCTOR CONVERSION CHART

TRAP & MISC. CONTROL
 B-D-1, 145-C
 E C S M8105-0-1
 SCALE DIST. SHEET OF ?

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ORDER OF SERVICE VECTOR

| | | |
|---|-------------------------|-----|
| 1 | CONSOLE FLAG | 250 |
| 2 | SEG MEM MANAGEMENT TRAP | 4 |
| 3 | STACK LIMIT YELLOW | 24 |
| 4 | POWER FAIL | 244 |
| 5 | FP EXCEPTION TRAP | 244 |

| CP LEVEL 7 | |
|--|----------------------------|
| 6 | PIRQ 7 (PIR15) |
| 7 | BUS REQUEST 7 |
| CP LEVEL 6 | |
| 8 | PIRQ 6 (PIR14) |
| 9 | BUS REQUEST 6 |
| CP LEVEL 5 | |
| 10 | PIRQ 5 (PIR13) |
| 11 | BUS REQUEST 5 |
| CP LEVEL 4 | |
| 12 | PIRQ 4 (PIR12) |
| 13 | BUS REQUEST 4 |
| CP LEVEL 3 | |
| 14 | PIRQ 3 (PIR11) |
| 14 | INTR |
| CP LEVEL 2 | |
| 15 | PIRQ 2 (PIR10) |
| 15 | INTR |
| CP LEVEL 1 | |
| 16 | PIRQ 1 (PIR09) |
| 16 | INTR |
| CP LEVEL 0 | |
| 17 | 17 BIT (PS04) AND NOT RTT3 |
| 14 | INTR |
| NOT NOT LOCKED OUT BY PROC STATUS LEVELS BUT SERVICED LAST | |

REVISIONS

| REV | CHANGE NO |
|-----|-----------|
| | |
| | |
| | |

PRIORITY ARBITRATION SLOT 11

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|------|-------------|----------|----------|
| 11/45 | | | | |

| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE | DATE |
|--|---------|---------|--------|
| DECIMALS | ANGLES | 0/29/71 | 3/6/72 |
| .XXX = .005 | ±0° 30' | 3-6-72 | 3/6/72 |
| .XX = .02 | | 3/6/72 | 3/6/72 |
| .X = .1 | | 3/6/72 | 3/6/72 |

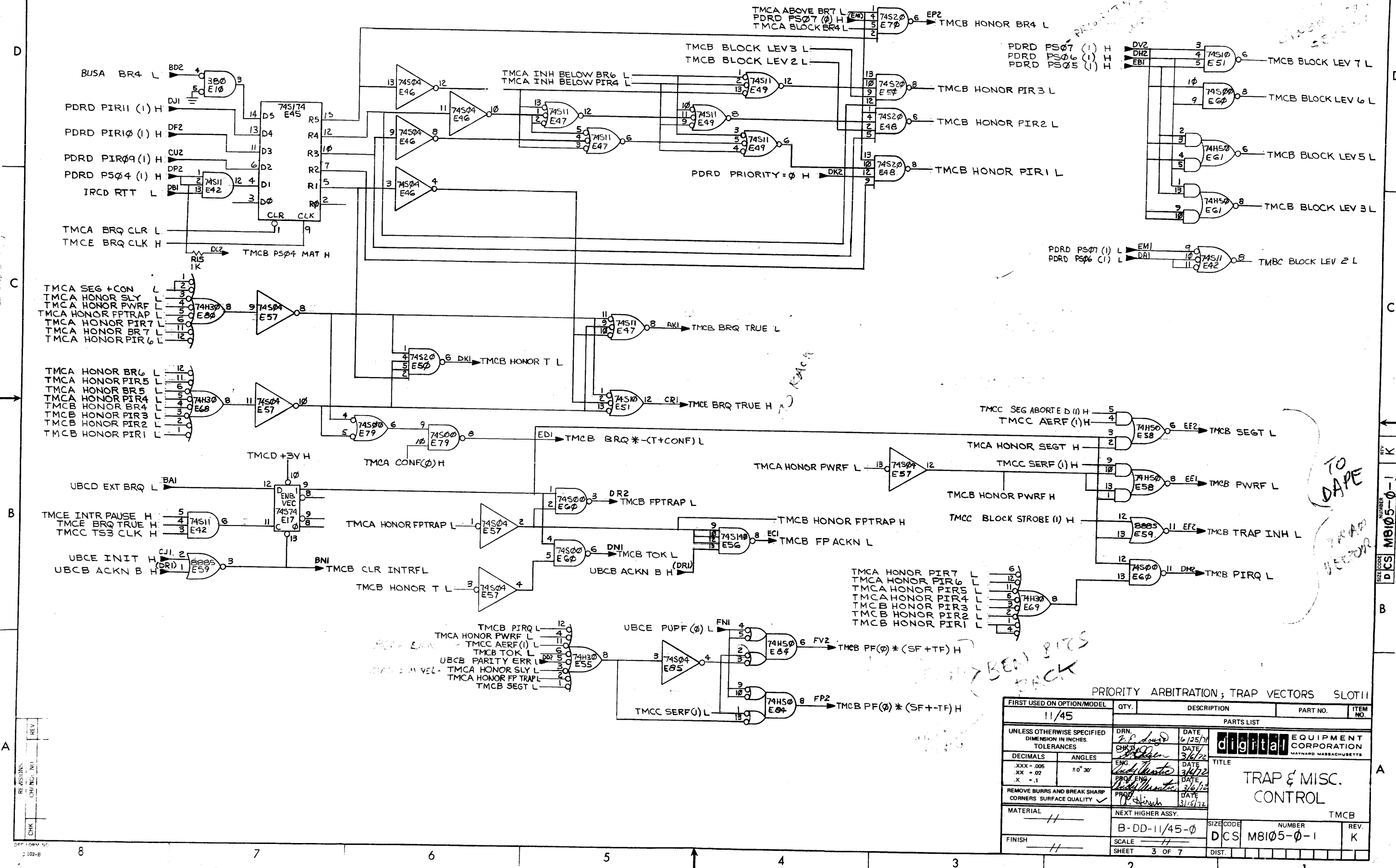
digital EQUIPMENT CORPORATION
MAYFORD, MASSACHUSETTS

TRAP & MISC CONTROL (TMCA)

| | | | | |
|----------|-------------------|-----------|-----------|-----|
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV |
| ++ | B-DD-11/45-0 | DCS | M8105-0-1 | K |
| FINISH | SCALE | SHEET | OF | |
| ++ | | 2 | OF 7 | |

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1-0-5018W SC d 2

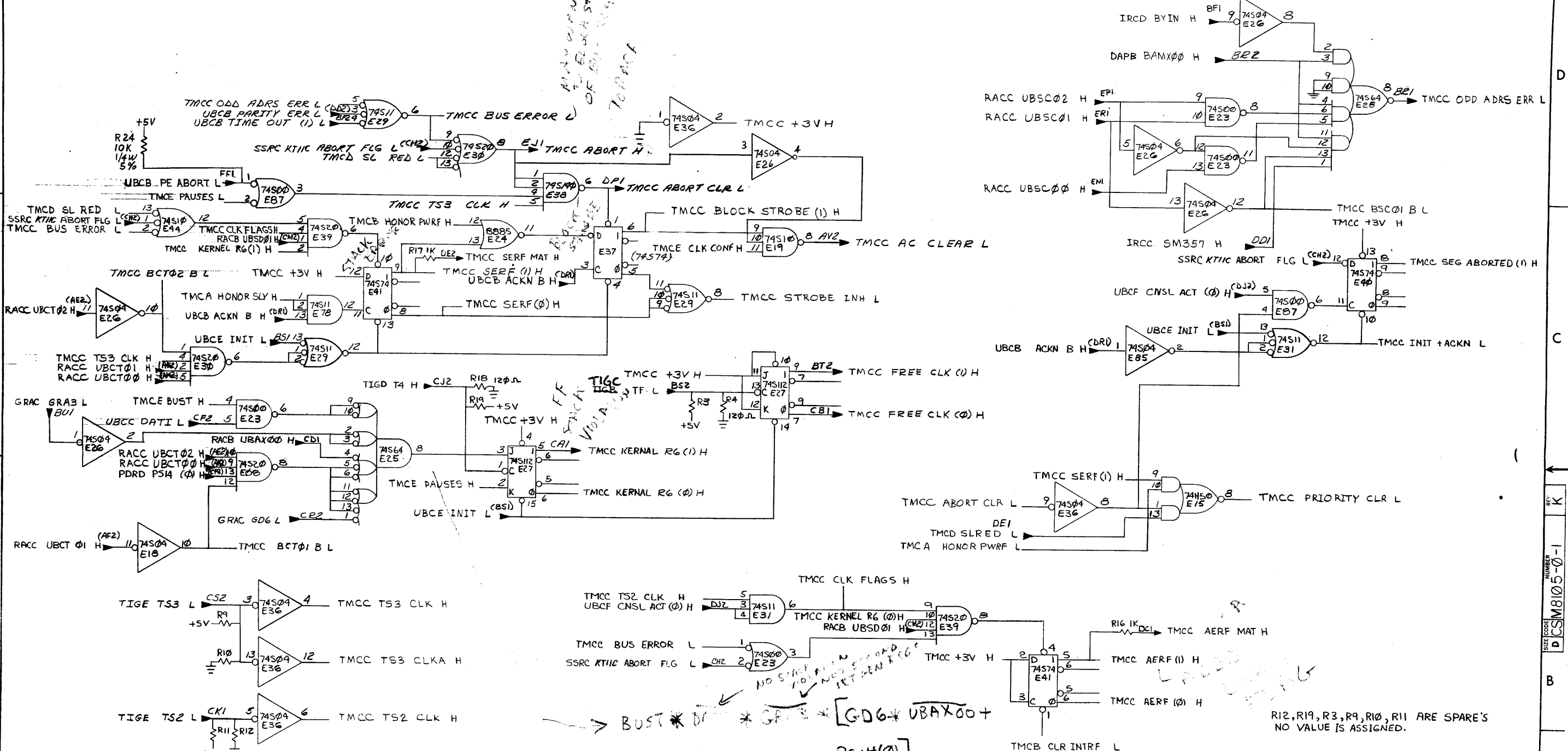


| PARTS LIST | | | |
|---|---------|----------------------|-------------------|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. ITEM NO. |
| 11/45 | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | |
| DECIMALS | ANGLES | TITLE | |
| .XXX - .005 | ±0° 30' | TRAP & MISC. CONTROL | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | |
| MATERIAL | | | |
| NEXT HIGHER ASSY. | | | |
| FINISH | | | |
| SCALE | | SIZE CODE | NUMBER |
| SHEET 3 OF 7 | | DCS | M8105-0-1 |
| DIST. | | REV. | K |

| | |
|-----|--|
| REV | |
| CHG | |
| NO | |
| NO | |

102-B

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ANY WIRING TO BLOCK STROBE TO RACK

FF STACK TIGC DCS

NO SIGNAL FROM SERIAL REG
 BUST * D * GATE * [GD6 * UBAX00 +
 R015 * PS14(0)]
 JSR STACK

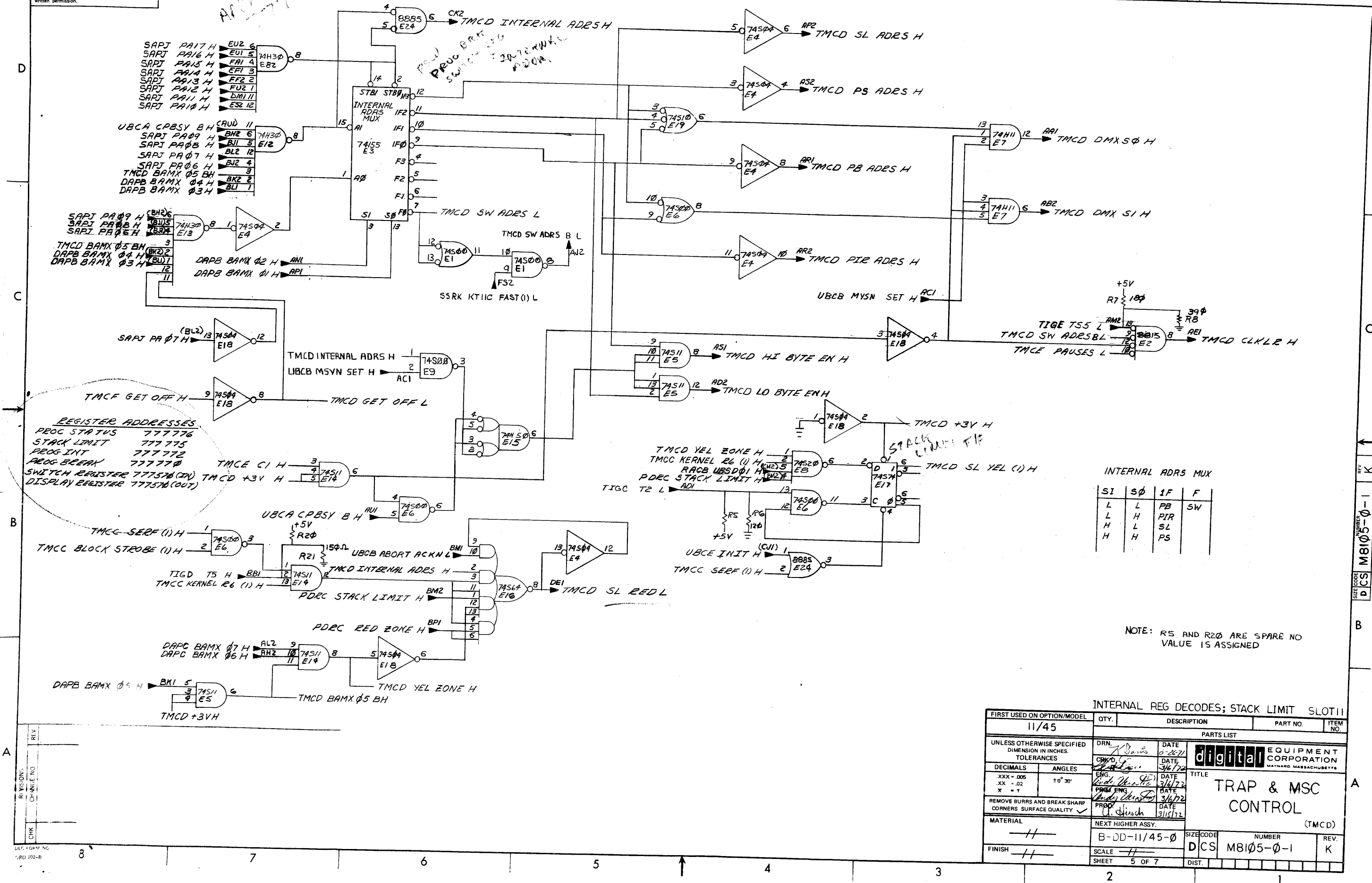
R12, R19, R3, R9, R10, R11 ARE SPARE'S
 NO VALUE IS ASSIGNED.

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|-------------|---|-----------|
| 11/45 | | | | | |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DBN | DATE | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS | ANGLES | CHK'D | DATE | TITLE TRAF & MSC CONTROL | |
| .XXX = .005 | ±0° 30' | ENG | DATE | | |
| .XX = .02 | | PRG. ENG. | DATE | | |
| .X = .1 | | PROB. ENG. | DATE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | (TMCC) | |
| FINISH | | SCALE | | SIZE CODE | NUMBER |
| | | SHEET 4 OF 7 | | DCS | M8105-0-1 |
| | | | | DIST. | K |

REVISIONS
 CHANGE NO.

REV. K
 NUMBER
 DCS M8105-0-1
 SIZE CODE

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REGISTER ADDRESSES
 PROC STATUS 777776
 STACK LIMIT 777775
 PROG INT 777772
 PROG BREAK 777770
 SWITCH REGISTER 777570 (IN)
 DISPLAY REGISTER 777570 (OUT)

INTERNAL ADRS MUX

| SI | S0 | 1F | F |
|----|----|-----|----|
| L | L | PB | SW |
| L | L | PIR | SL |
| H | H | SL | PS |
| H | H | | |

NOTE: R5 AND R20 ARE SPARE NO VALUE IS ASSIGNED

INTERNAL REG DECODES; STACK LIMIT SLOT 11

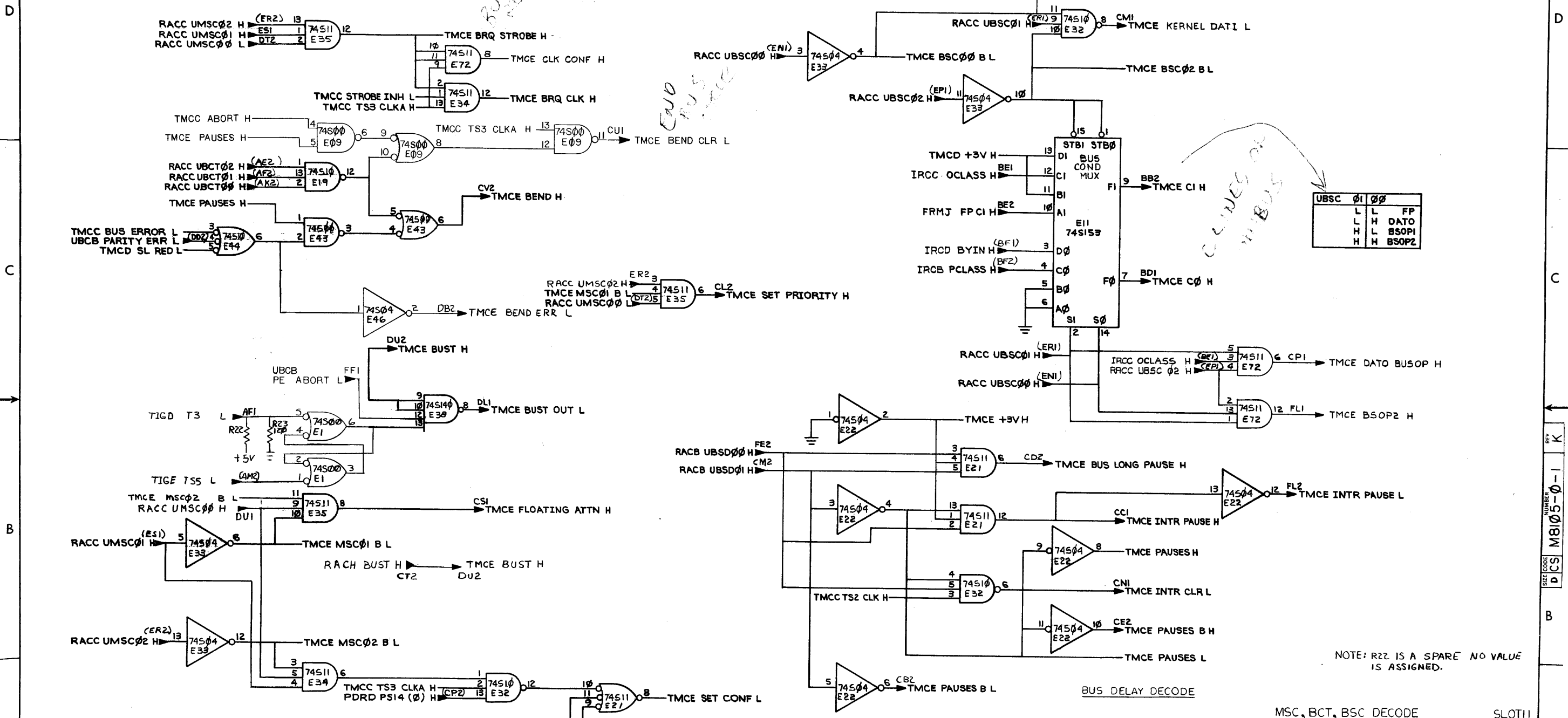
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-----------|-------------------------------|-----------|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX = .005 | .XX = .02 | digital EQUIPMENT CORPORATION | | |
| X = .1 | ±0° 30' | MAYNARD, MASSACHUSETTS | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| NEXT HIGHER ASSY. | | | | |
| FINISH | | | | |
| B-DD-11/45-0 | | SIZE CODE | NUMBER | REV. |
| SHEET 5 OF 7 | | DCS | M8105-0-1 | K |
| | | DIST. | | |

REVISIONS

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |

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1-0-9018W SCD 2



| | |
|---------|----|
| UBSC 01 | 00 |
| L | L |
| L | H |
| H | L |
| H | H |

NOTE: R22 IS A SPARE NO VALUE IS ASSIGNED.

BUS DELAY DECODE

MSC, BCT, BSC DECODE

SLOT 11

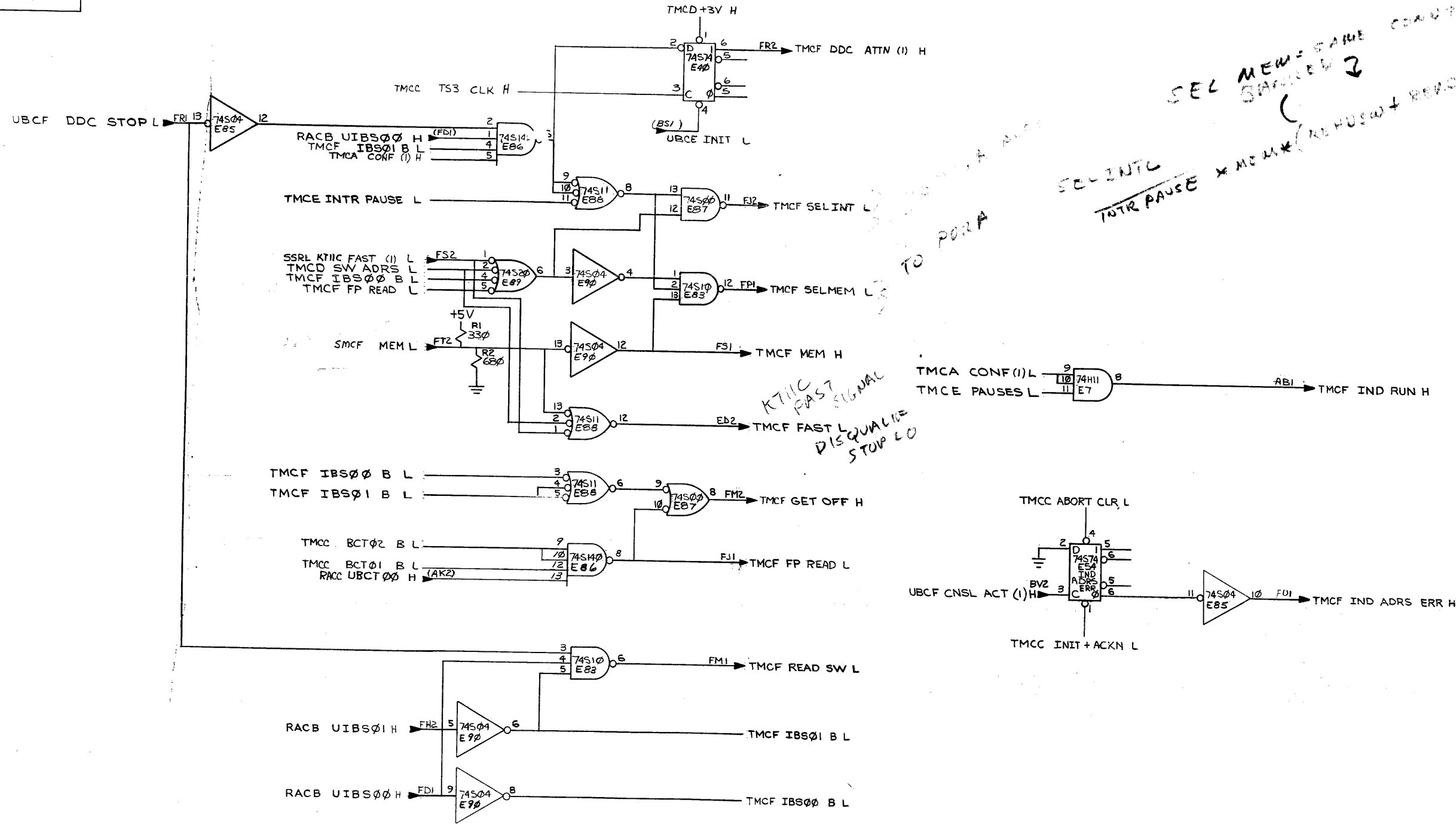
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-----------------------|--------------|---|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN. S.W. Rollets | DATE 6/28/71 | digital EQUIPMENT CORPORATION <small>MATHEW MASSACHUSETTS</small> |
| DECIMALS | ANGLES | CHKD. [Signature] | DATE 3/17/72 | |
| .XXX = .005 | ± 0° 30' | ENG. [Signature] | DATE 3/17/72 | |
| .XX = .02 | | PRG. ENG. [Signature] | DATE 3/17/72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PRG. [Signature] | DATE 3/15/72 | |
| MATERIAL | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | SCALE - 11/45-0 | | DCS | M8105-0-1 |
| | | SHEET 6 OF 7 | REV | K |

TITLE
TRAP & MSC CONTROL
(TMCE)

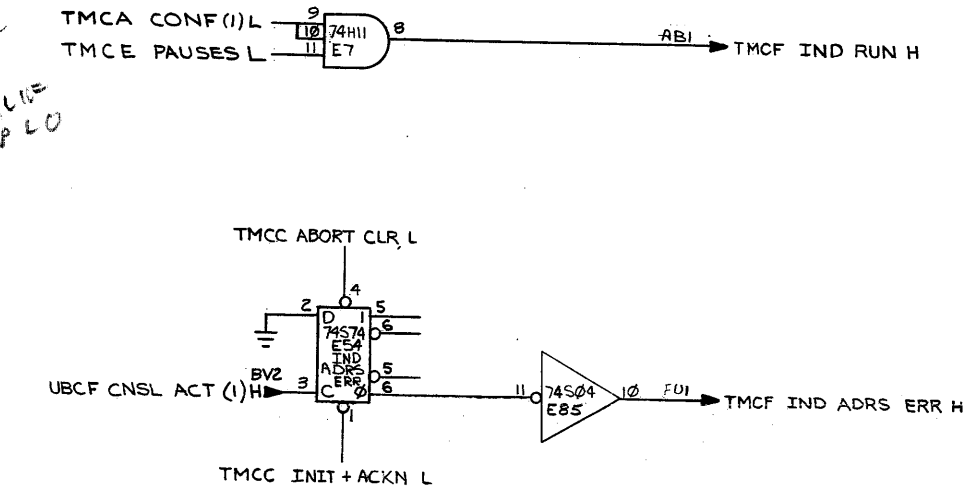
| | |
|------------|--|
| REV | |
| CHANGE NO. | |
| CHK | |

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1-0-5018W SC 2



SEL MEM = SAME
 INTR PAUSE * MEM * (NO HUSW + READ PS + EPRC) + NEW FAST
 (KTHC)



BRMX SELECTION; FP READ SLOT11

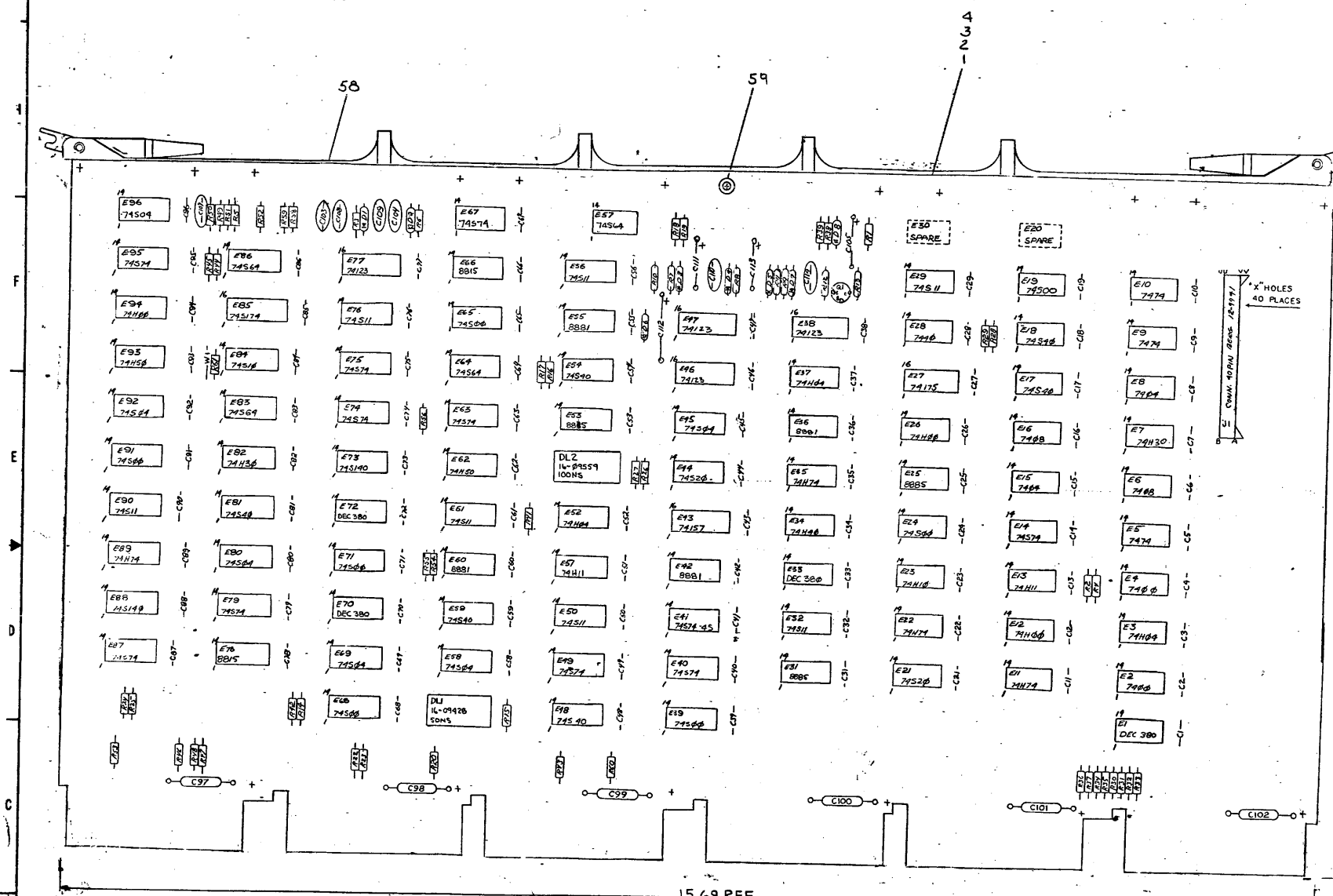
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|-------------------|---|-----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| .XXX ± .005 | ± 0° 30' | DATE | | |
| .XX ± .02 | | DATE | | |
| .X ± .1 | | DATE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | SCALE | SIZE CODE | NUMBER |
| | | 7 OF 7 | DCS | M8105-0-1 |
| | | SHEET | DIST. | REV. K |

TITLE
TRAP & MSC CONTROL (TMCF)

| | |
|-----|--|
| REV | |
| CHK | |
| CHG | |
| REV | |
| CHK | |
| CHG | |

DEC FORM INC
 ORD 102-B

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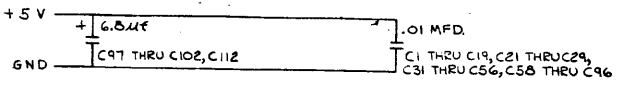


NOTES:

- UNLESS OTHERWISE NOTED RESISTANCE IS IN Ω AND CAPACITANCE IS IN PICO FARADS. CAPS. WITHOUT VALUE NOTED ARE $0.1 \mu F$
- RESISTOR R19, R49, R51, R54 AND R59 ARE SPARES - NO VALUES ASSIGNED

AA2, AV1, BA2, BV1, CA2, CV1, DA2, DV1, EA2, EV1, FA2, FV2

AC2, AN2, AH1, AT1, BC2, BN2, BH1, BT1, CC2, CN2, CH1, CT1, DC2, DN2, DH1, DT1, EC2, EN2, EH1, ET1, FC2, FN2, FH1, FT1



| IC TYPE | ITEM NO. | ANG | FROM PT | TO PT |
|--|----------|-----|---------|-------|
| IC PIN LOCATIONS <td></td> <td></td> <td></td> <td></td> | | | | |
| JUMPER LIST <td></td> <td></td> <td></td> <td></td> | | | | |

| ITEM NO. | DESCRIPTION | QTY | UNIT |
|----------|------------------------------|-----|------|
| 1 | ETCHED CIRCUIT BOARD | 500 | PCB |
| 2 | MODULE ECO HISTORY | 1 | FORM |
| 3 | ASSY/DRILLING HOLE LOCATION | 1 | FORM |
| 4 | KEY COORDINATE HOLE LOCATION | 1 | FORM |

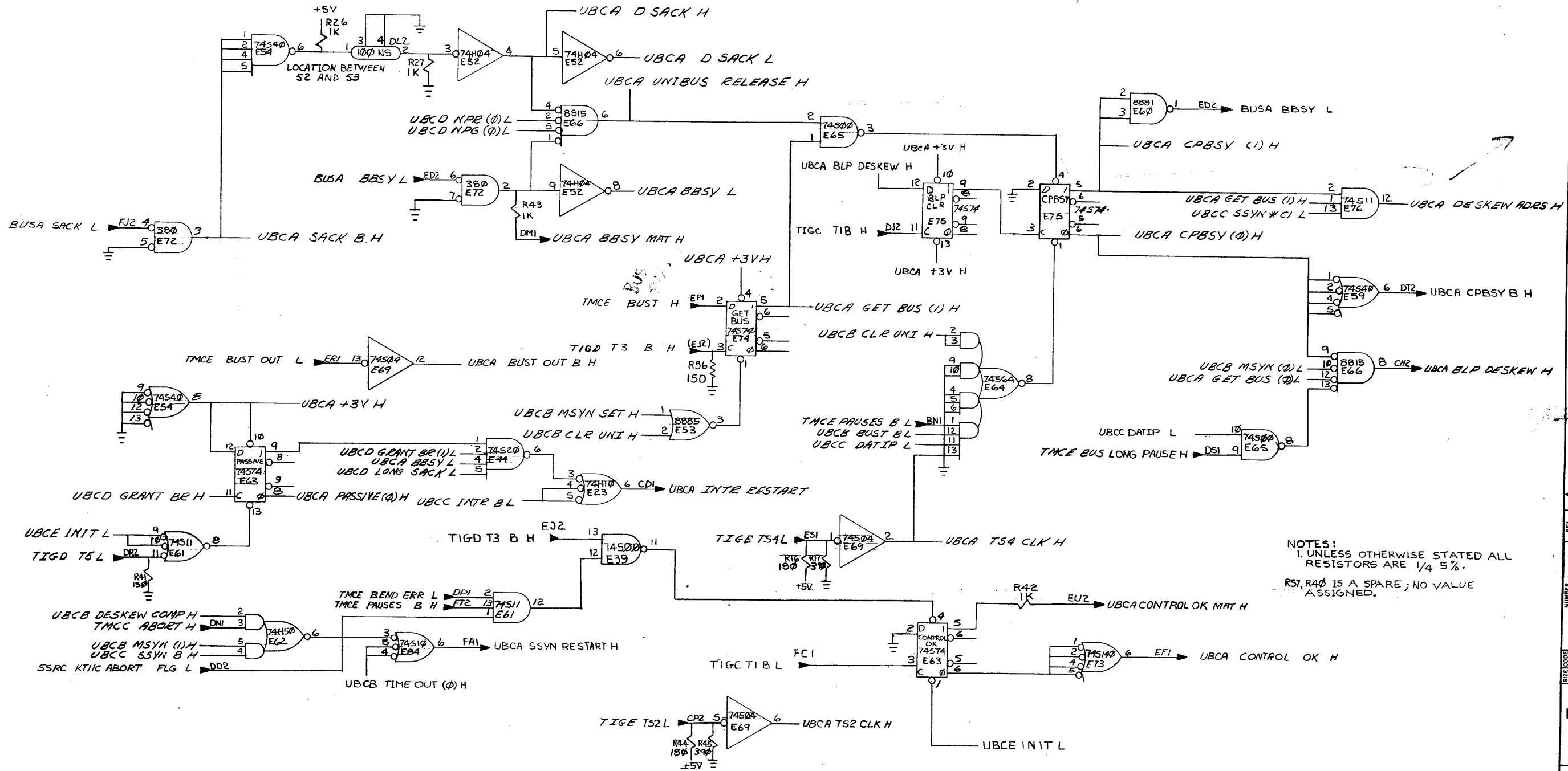
| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|---|--|----------------|----------|
| 1 | W1 | INSULATED JUMPERS 22AWG | 9107350 | 12 |
| 1 | | 22 AWG BUSS WIRE | 9107560-01 | 41 |
| 1 | | CONN, BERG (C40 PIN) | 1209941 | 60 |
| 1 | | EYELET | 9006732 | 59 |
| 1 | | HANDLE, MODULE | E-PS-1210711-2 | 56 |
| 1 | E41 | IC DEC 74574-45 | 1910950 | 57 |
| 2 | E66, E76 | IC DEC 8015 | 1909713 | 56 |
| 3 | E25, E31, E53 | IC DEC 8885 | 1910649 | 55 |
| 4 | E34, E42, E55, E60 | IC DEC 8881 | 1909705 | 54 |
| 4 | E1, E33, E70, E72 | IC DEC 380 | 1909485 | 53 |
| 1 | E27 | IC DEC 74175 | 1910651 | 52 |
| 1 | E85 | IC DEC 745174 | 1910550 | 51 |
| 1 | E43 | IC DEC 74157 | 1910655 | 50 |
| 2 | E73, E88 | IC DEC 745140 | 1910546 | 49 |
| 4 | E38, E44, E47, E77 | IC DEC 74123 | 1910436 | 48 |
| 10 | E 9, E40, E49, E63, E67, E74, E79, E81, E 95, E 75 | IC DEC 74574 | 1910544 | 47 |
| 4 | E11, E22, E35, E69 | IC DEC 74H74 | 1909467 | 46 |
| 3 | E5, E9, E10 | IC DEC 7474 | 1905547 | 45 |
| 4 | E4, E63, E86, E57 | IC DEC 74S64 | 1910542 | 44 |
| 2 | E62, E93 | IC DEC 74H50 | 1909060 | 43 |
| 6 | E17, E18, E48, E54, E59, E81 | IC DEC 74S40 | 1910541 | 42 |
| 1 | E34 | IC DEC 74H40 | 1905566 | 41 |
| 1 | E28 | IC DEC 7440 | 1905579 | 40 |
| 2 | E7, E82 | IC DEC 74H30 | 1909059 | 39 |
| 2 | E2, E44 | IC DEC 74S20 | 1910539 | 38 |
| 7 | E29, E32, E50, E56, E61, E76, E90 | IC DEC 74S11 | 1910537 | 37 |
| 2 | E3, E51 | IC DEC 74H11 | 1909267 | 36 |
| 1 | E84 | IC DEC 74S10 | 1910536 | 35 |
| 1 | E23 | IC DEC 74H10 | 1909057 | 34 |
| 2 | E6, E16 | IC DEC 7408 | 1910155 | 33 |
| 6 | E45, E58, E64, E80, E42, E46 | IC DEC 74S04 | 1910534 | 32 |
| 3 | E3, E37, E52 | IC DEC 74H04 | 1909931 | 31 |
| 2 | E8, E15 | IC DEC 7404 | 1909636 | 30 |
| 7 | E 3, E24, E39, E65, E48, E71, E91 | IC DEC 74S00 | 1910532 | 29 |
| 3 | E12, E26, E94 | IC DEC 74H00 | 1909056 | 28 |
| 2 | E2, E4 | IC DEC 7400 | 1905575 | 27 |
| 1 | DL2 | DELAY LINE 100NS | 1609559 | 26 |
| 1 | DL1 | DELAY LINE 50NS | 1609428 | 25 |
| 1 | Q1 | TRANSISTOR DEC 3009B | 1503100 | 24 |
| 1 | R10 | RESISTOR 30K, 1/4W, 5% | 1302394 | 23 |
| 2 | R7, R11 | RESISTOR 20K, 1/4W, 5% | 1302391 | 22 |
| 5 | R1, R3, R6, R8, R9 | RESISTOR 15K, 1/4W, 5% | 300496 | 21 |
| 1 | R12 | RESISTOR 3.9K, 1/4W, 5% | 1300444 | 20 |
| 9 | R5, R13, R26, R27, R61, R42, R43, R46, R53 | RESISTOR 1K, 1/4W, 5% | 1300365 | 19 |
| 4 | R4, R23, R25, R39 | RESISTOR 680 Ω , 1/4W, 5% | 1301424 | 18 |
| 8 | R17, R28, R31, R33, R35, R37, R45, R48 | RESISTOR 390 Ω , 1/4W, 5% | 1300309 | 17 |
| 4 | R2, R22, R24, R35 | RESISTOR 330 Ω , 1/4W, 5% | 1300295 | 16 |
| 8 | R14, R29, R30, R32, R34, R36, R44, R47 | RESISTOR 180 Ω , 1/4W, 5% | 1301322 | 15 |
| 8 | R15, R41, R52, R55, R56, R58, R60, R20 | RESISTOR 150 Ω , 1/4W, 5% | 1300250 | 14 |
| 1 | R50 | RESISTOR 120 Ω , 1/4W, 5% | 1300247 | 13 |
| 2 | R4, R18 | RESISTOR 100 Ω , 1/4W, 5% | 1300229 | 12 |
| 8 | D1 THRU D8 | DIODE D664 | 1100114 | 11 |
| 2 | C111, C113 | CAPACITOR .47 μF , 35V, 10% | 1005965 | 10 |
| 3 | C07, C10, C14 | CAPACITOR 330PF, 20V, 5% | 1000023 | 9 |
| 1 | C05 | CAPACITOR 2.2 μF , 20V, 10% | 1002427 | 8 |
| 4 | C03, C09, C08, C109 | CAPACITOR 1200PF, 20V, 5% | 1002424 | 7 |
| 7 | C17 THRU C102, C112 | CAPACITOR 6.8 μF , 35V, 20% | 1000067 | 6 |
| 1 | C1 THRU C19, C21 THRU C24, C31 THRU C56, C58 THRU C96 | CAPACITOR .01 μF , 100V, 20% DISC | 1001610 | 5 |
| 1 | | ETCHED CIRCUIT BOARD | 5009802 | 4 |
| 1 | | MODULE ECO HISTORY | B-MH-M8106-0-3 | 3 |
| 1 | | ASSY/DRILLING HOLE LOCATION | E-AH-M8106-0-5 | 2 |
| 1 | | KEY COORDINATE HOLE LOCATION | K-CO-M8106-0-4 | 1 |

| DEC NO. | EIA NO. | DEC NO. | EIA NO. |
|------------|---------|-----------|---------|
| DEC 3009 B | 1503100 | DEC 666 B | 1100118 |

| ITEM NO. | DESCRIPTION | PART NO. | ITEM NO. |
|----------|------------------------------|----------------|----------|
| 1 | ETCHED CIRCUIT BOARD | 5009802 | 4 |
| 2 | MODULE ECO HISTORY | B-MH-M8106-0-3 | 3 |
| 3 | ASSY/DRILLING HOLE LOCATION | E-AH-M8106-0-5 | 2 |
| 4 | KEY COORDINATE HOLE LOCATION | K-CO-M8106-0-4 | 1 |

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-D-30 BM 500 2



NOTES:
 1. UNLESS OTHERWISE STATED ALL RESISTORS ARE 1/4 5%.
 R57, R40 IS A SPARE; NO VALUE ASSIGNED.

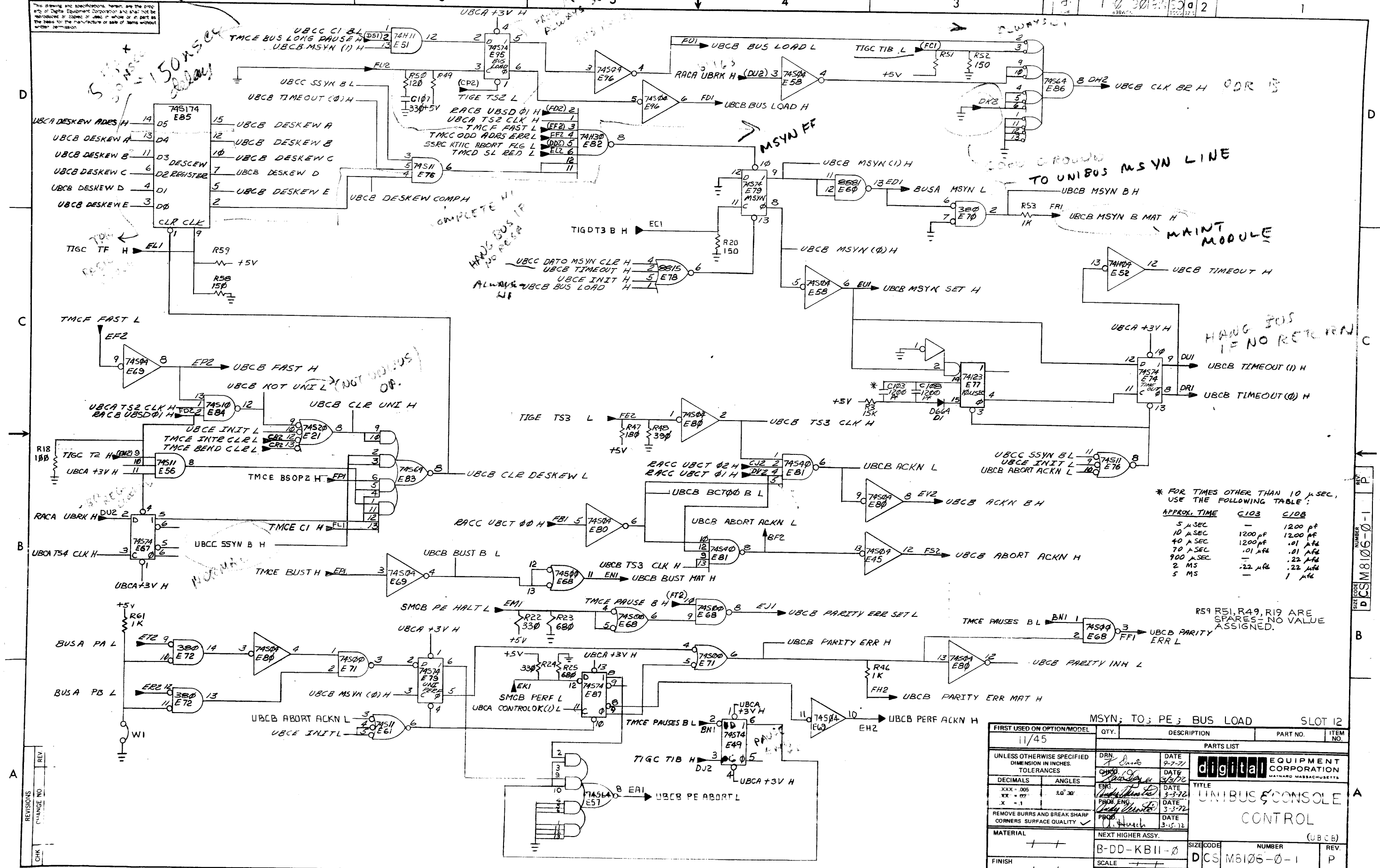
CP BUSY; CONTROL OK; TIG RESTARTS SLOT 12

| | | | | |
|--|-------------------|---------------------------------|-----------|----------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | TITLE | | |
| .XXX = .005 | ±0° 30' | UNIBUS & CONSOLE CONTROL (UBCA) | | |
| .XX = .02 | | REVISIONS | | |
| .X = .1 | | REV. 1 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
| // | B-DD-KB11-0 | DCS | M8106-0-1 | p |
| FINISH | SCALE | SHEET | 2 OF 14 | DIST. |
| // | // | | | |

| | | | |
|-----------|-----|------|----|
| REVISIONS | NO. | DATE | BY |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |

DEC FORM NO. DRD 102-B

BOIS LONGER 8 LONGER NEEDLE
 FAST L STOPS MASTING IF MIS MEM PDR.
 NOTE * MSYN NEVER HAS TIME TO GET PREPARED IF MOS MEMORY IS ADDRESSED



* FOR TIMES OTHER THAN 10 μSEC, USE THE FOLLOWING TABLE:

| APPROX. TIME | C103 | E108 |
|--------------|---------|---------|
| 5 μSEC | — | 1200 pF |
| 10 μSEC | — | 1200 pF |
| 40 μSEC | 1200 pF | .01 μF |
| 70 μSEC | .01 μF | .01 μF |
| 900 μSEC | — | .22 μF |
| 2 MS | .22 μF | .22 μF |
| 5 MS | — | 1 μF |

R59, R51, R49, R19 ARE SPARES - NO VALUE ASSIGNED.

| REV | NO | DATE | BY |
|-----|----|------|----|
| | | | |

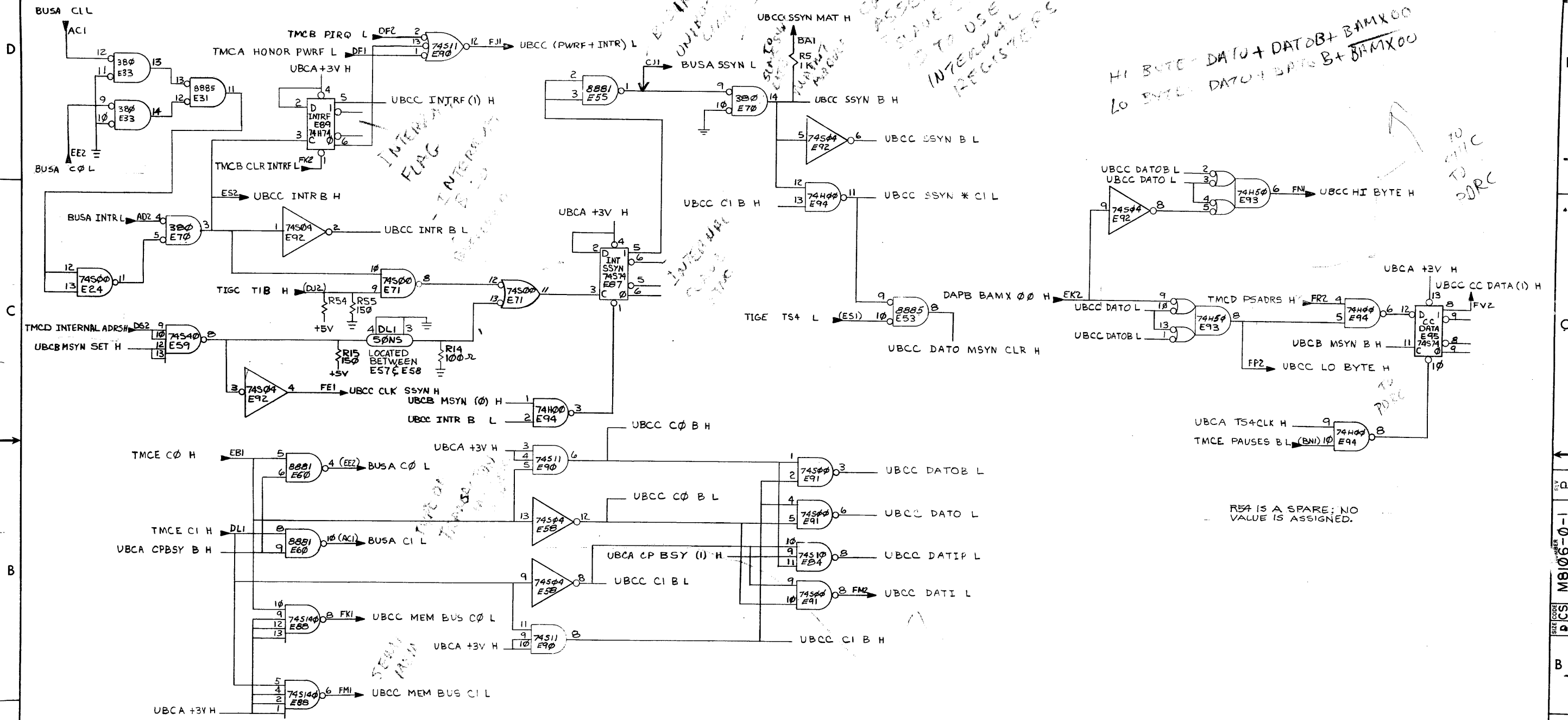
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|------|-------------|----------|----------|
| 11/45 | | | | |

| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN | DATE | |
|--|-----|--------|--|
| DECIMALS | | 9-7-71 | |
| ANGLES | | 5/5/72 | |
| XXX - .005 | | 3-3-72 | |
| XX - .02 | | 3-3-72 | |
| X - .1 | | 3-3-72 | |

| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
|----------|-------------------|-------------|---------------|------|
| | | B-DD-KB11-0 | DCS M8106-0-1 | P |

DCS M8106-0-1

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UNIBUS CONTROL REGISTER ONLY
CPU ASSERIS
ISSUE CODE
TO USE
INTERNAL
REGISTERS

HI BYTE = DATO + DATOB + BAMX00
LO BYTE = DATO + DATOB + BAMX00

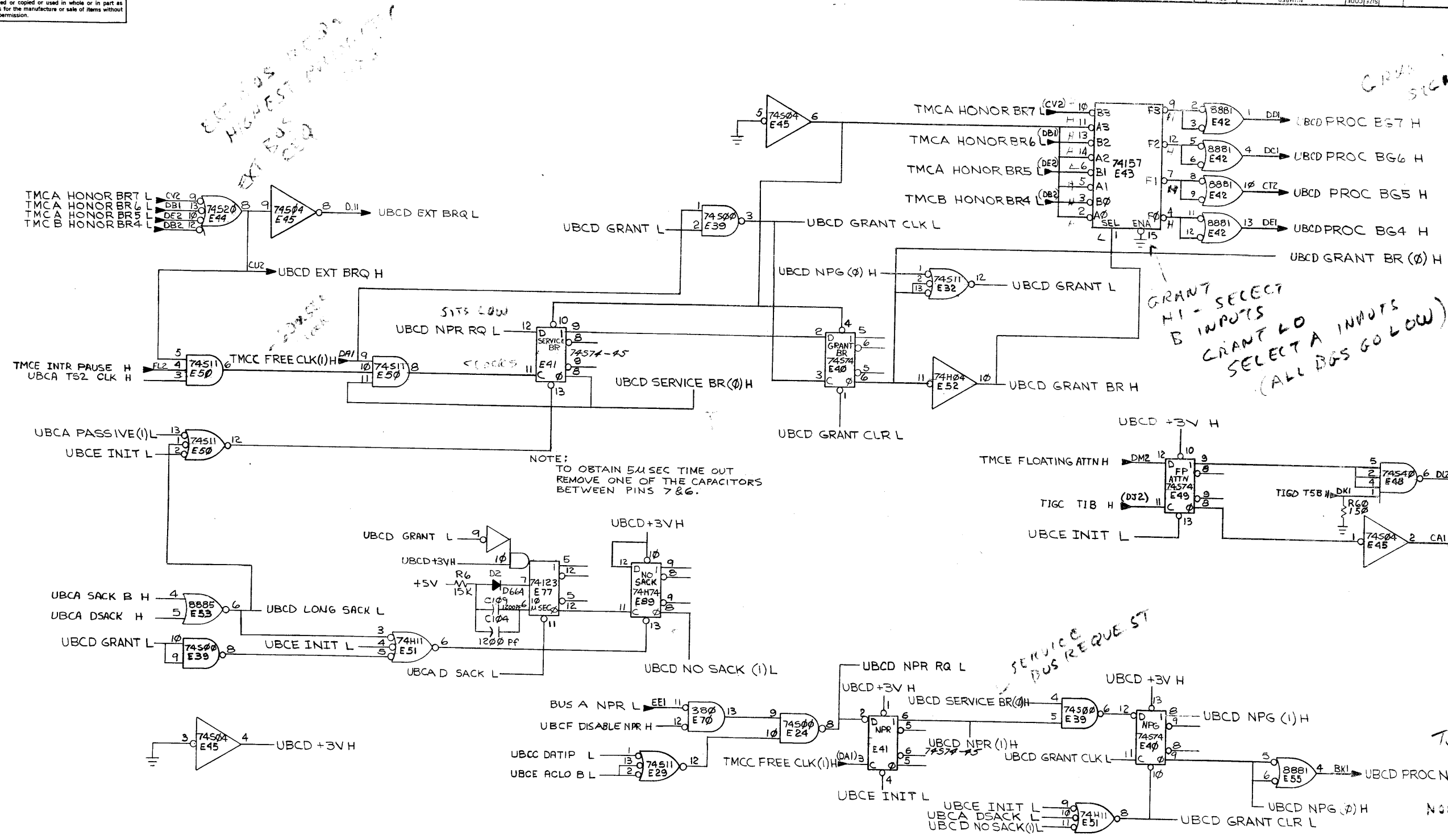
TO CPU
TO DR
TO DR

R54 IS A SPARE: NO VALUE IS ASSIGNED.

| REV | |
|-----|----|
| | |
| CHG | NO |
| | |
| | |
| | |

| INTERNAL SSYN; INTRF; CC DATA | | | | SLOT 12 | | | |
|--|------|----------------------|---------------------|--|--|-----------|--|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. | | | |
| PARTS LIST | | | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN Z Carberry | DATE 24 JUN 71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | | |
| DECIMALS ANGLES | | CHKD R. [unclear] | DATE 3/3/72 | | | | |
| .XXX = .005 .XX = .02 .X = .1 | | ENG L. [unclear] | DATE 3-3-72 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PRD [unclear] | DATE 3-3-72 | | | | |
| MATERIAL | | PRD A. Hurd | DATE 3-3-72 | | | | |
| FINISH | | NEXT HIGHER ASSY. | | UNIBUS & CONSOLE CONTROL (UBCC) | | | |
| | | B-DD-KB11-0 | | | | | |
| | | SIZE CODE DCS | NUMBER M8106-0-1 | | | REV. P | |
| | | SCALE | | | | | |
| | | SHEET 4 OF 14 | DIST. | | | | |

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CUSTOMER'S HIGHEST PRIORITY EXT BRQ

GRANT SIGNALS

GRANT HI - SELECT B INPUTS
GRANT LO - SELECT A INPUTS
(ALL BBS GO LOW)

NOTE:
TO OBTAIN 5μ SEC TIME OUT REMOVE ONE OF THE CAPACITORS BETWEEN PINS 7 & 6.

SERVICE BUS REQUEST

TO UNILIBUS

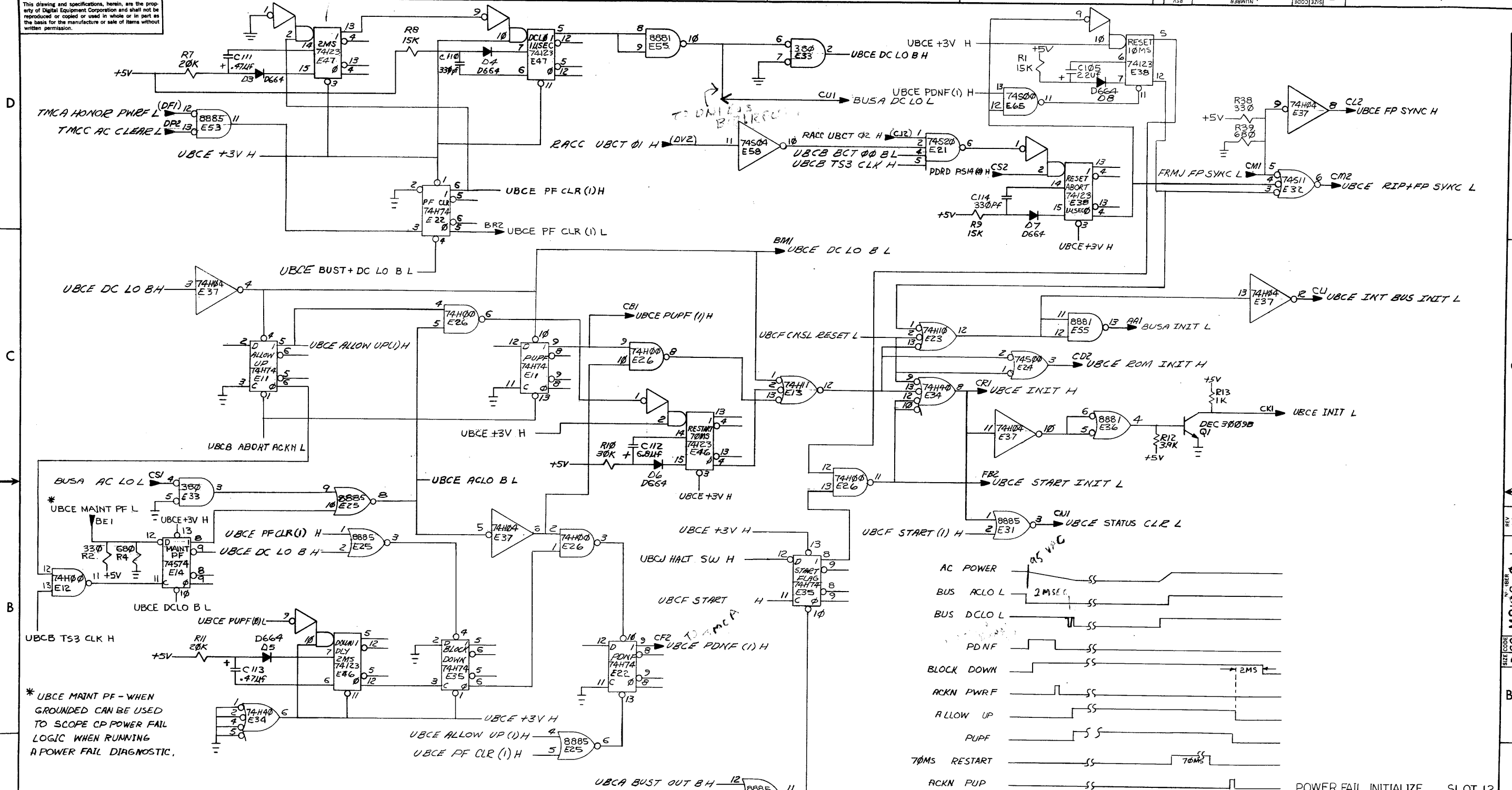
NON-PROG

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--------|-------------------|-------------|--|----------|
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | | |
| DECIMALS | ANGLES | PARTS LIST | | | |
| XXX-000 | XX-00 | DRN. | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| X | -1 | CHDR. | DATE | UNIBUS & CONSOLE CONTROL (UBCD) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | ENGR. | DATE | REV. | |
| MATERIAL | | PROL ENG. | DATE | D | |
| FINISH | | PROG. | DATE | CSMB106-0-1 | |
| | | NEXT HIGHER ASSY. | | NUMBER | |
| | | B-DD-KB11-0 | | REV. | |
| | | SCALE | | SIZE CODE | |
| | | SHEET 5 OF 14 | | D | |
| | | DIST. | | REV. | |

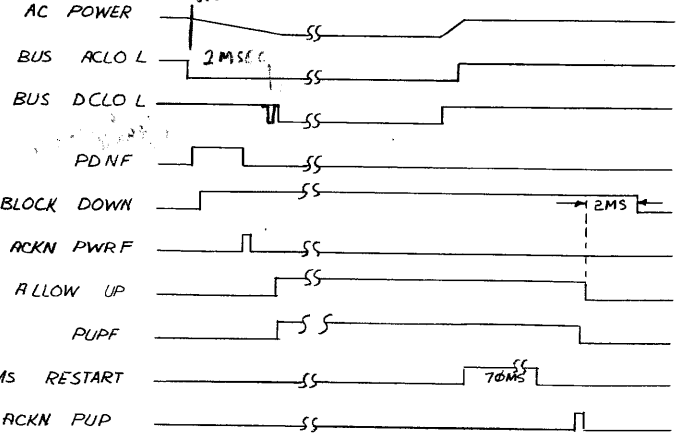
| REV. | CHG. NO. |
|------|----------|
| | |
| | |
| | |
| | |

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1-0-9018W [S] 2



* UBCE MAINT PF - WHEN GROUNDED CAN BE USED TO SCOPE CP POWER FAIL LOGIC WHEN RUNNING A POWER FAIL DIAGNOSTIC.



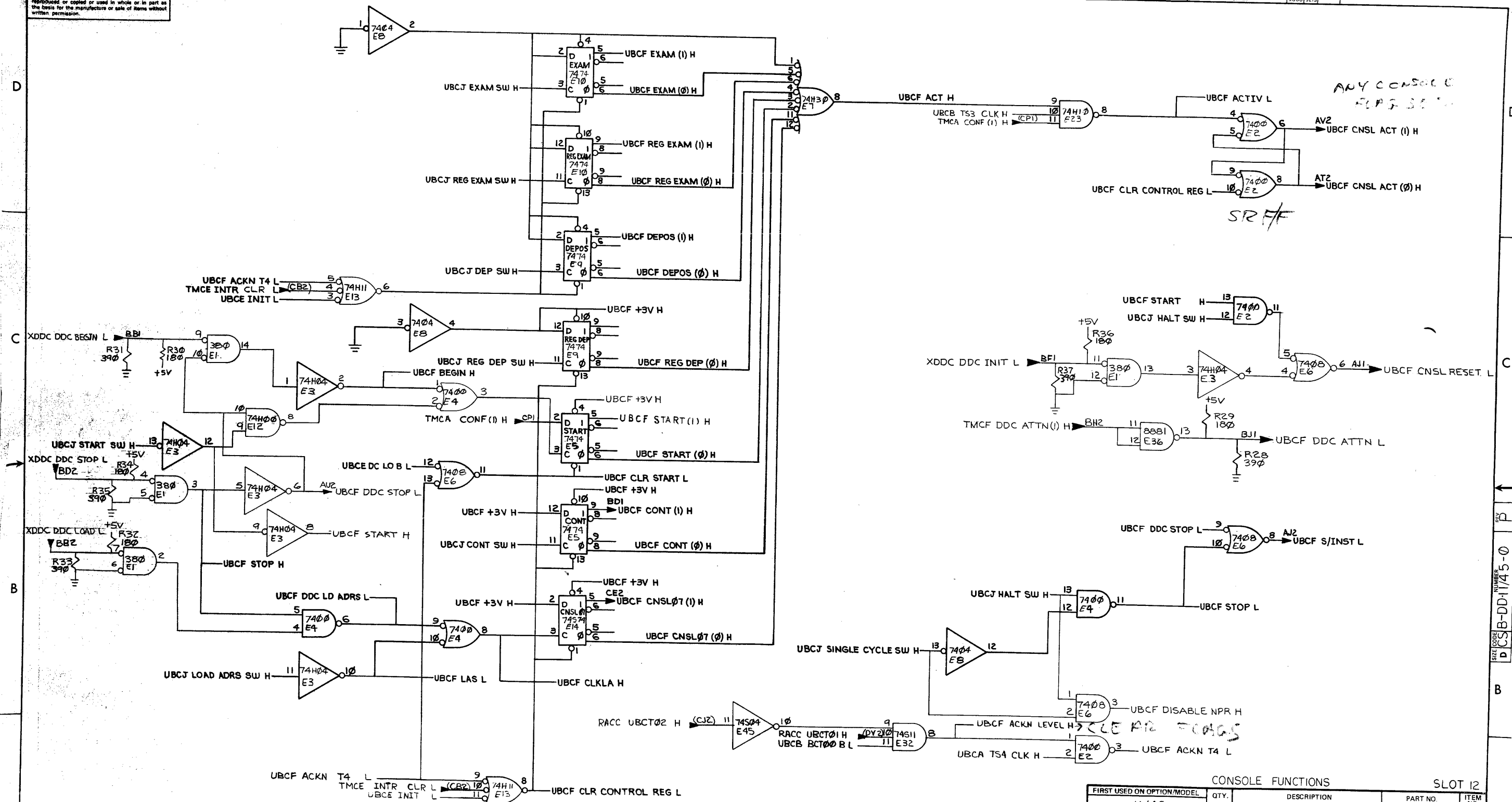
| REV | CHANGE NO. |
|-----|------------|
| | |
| | |
| | |

| | | | | |
|---|----------------------------------|-----------------|---|----------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN A. Davis | DATE 6-25-72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS .XXX ± .005 | CHK'D John | DATE 3-3-72 | TITLE UNIBUS & CONSOLE CONTROL | |
| ANGLES ± 0° 30' | ENG L. J. ... | DATE 3-3-72 | NUMBER M8106-0-1 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ENG. L. J. ... | DATE 3-3-72 | REV. P | |
| MATERIAL | PROB. A. ... | DATE 3-15-72 | SCALE 6 OF 14 | |
| FINISH | NEXT HIGHER ASSY. B-DD-KB11-0 | SCALE | SHEET | |

DEC FORM NO DRD 102-B

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d 0-91/11-00-B 2



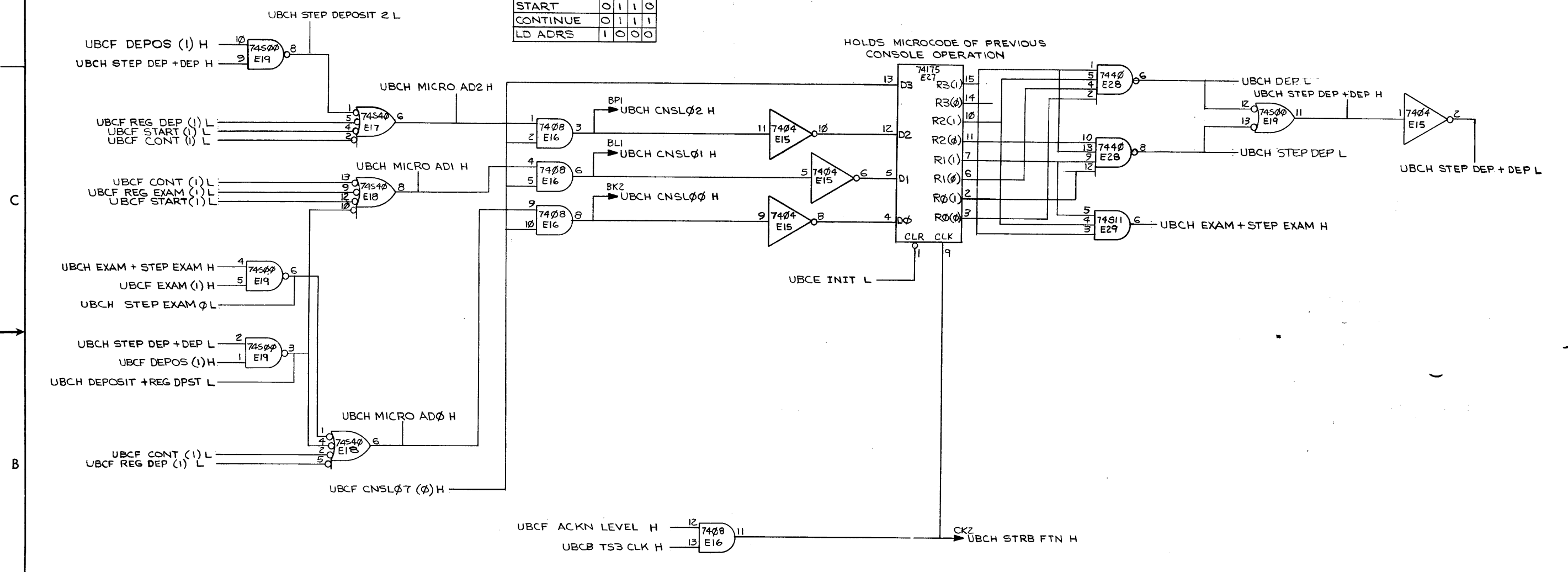
| REV | NO | DATE | BY |
|-----|----|------|----|
| | | | |
| | | | |
| | | | |

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-----------------|-------------|-------------------------------|----------|
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | | |
| DECIMALS | ANGLES | DRN. S.W. Ratio | DATE | PARTS LIST | |
| .XXX = .005 | ±0° 30' | | 6/25/71 | digital EQUIPMENT CORPORATION | |
| XX = .02 | | CHKD | DATE | MAYNARD MASSACHUSETTS | |
| X = .1 | | ENG. | 8/3/72 | TITLE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROJ. ENG. | 3-3-72 | UNIBUS & CONSOLE CONTROL | |
| | | PRAP. | DATE | (UBCF) | |
| | | | 5-15-72 | | |
| MATERIAL | NEXT HIGHER ASSY. | | | | |
| | | | | | |
| FINISH | SCALE | | | | |
| | | | | | |
| | SHEET 7 OF 14 | | | | |

SIZE CODE NUMBER
 DCS B-DD-11/45-0 P

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| CONSOLE FUNCTION | MICRO ADRS BIT | | | |
|------------------|----------------|---|---|---|
| | 7 | 2 | 1 | 0 |
| EXAM | 0 | 0 | 0 | 0 |
| STEP EXAM | 0 | 0 | 0 | 1 |
| REG EXAM | 0 | 0 | 1 | 0 |
| DEPOSIT | 0 | 0 | 1 | 1 |
| STEP DEPOSIT | 0 | 1 | 0 | 0 |
| REG DEPOSIT | 0 | 1 | 0 | 1 |
| START | 0 | 1 | 1 | 0 |
| CONTINUE | 0 | 1 | 1 | 1 |
| LD ADRS | 1 | 0 | 0 | 0 |



UBCF ACKN LEVEL H — 12 — 7408 E16 — 11 — CKZ — UBCH STRB FTN H
 UBCE INIT L — 13 — 7408 E16 — 11 —

| | | | | | |
|--|----------------------------------|-----------------|--|---------------------|-----------|
| FIRST USED ON OPTION/MODEL 11/45 | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN <i>[Signature]</i> | DATE 6-12-72 | digital EQUIPMENT CORPORATION MATYARD, MASSACHUSETTS TITLE UNIBUS & CONSOLE CONTROL (UBCH) | | |
| DECIMALS | ENG. <i>[Signature]</i> | DATE 3-3-72 | | | |
| ANGLES XXX = .005 .XX = .02 .X = .1 | PROV. ENG. <i>[Signature]</i> | DATE 3-3-72 | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | PROV. <i>[Signature]</i> | DATE 3-15-72 | | | |
| MATERIAL —//— | NEXT HIGHER ASSY. B-DD-KB11-0 | SCALE —//— | SIZE CODE DCS | NUMBER M8106-0-1 | REV. P |
| FINISH —//— | SHEET 8 OF 14 | DIST. | | | |

REVISIONS
CHK

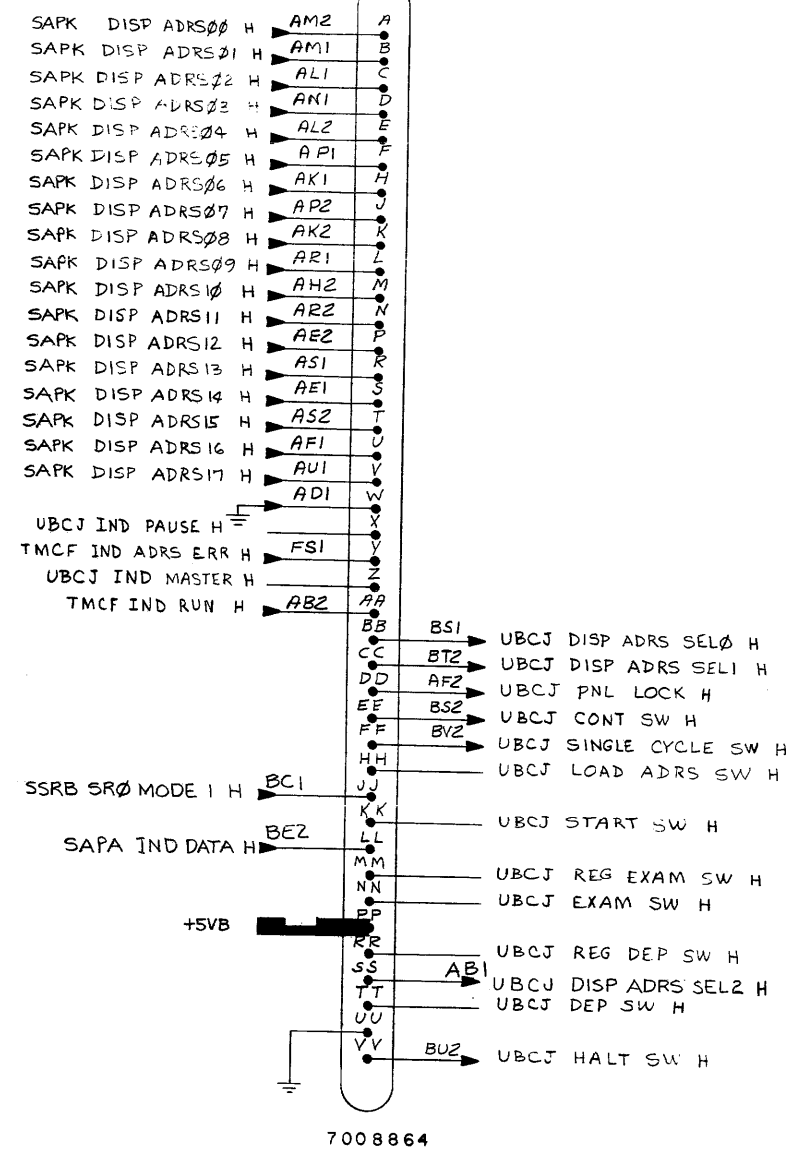
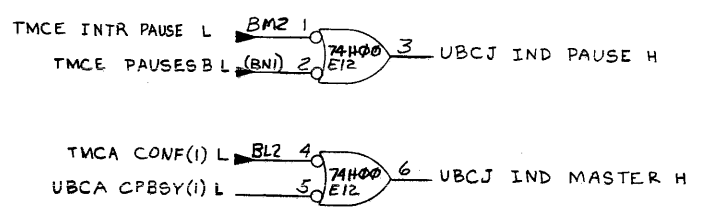
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d 1-0 2-1 3-1 4-1 5-1 6-1 7-1 8-1 9-1 10-1 11-1 12-1 13-1 14-1 15-1 16-1 17-1 18-1 19-1 20-1 21-1 22-1 23-1 24-1 25-1 26-1 27-1 28-1 29-1 30-1 31-1 32-1

UBC/KNL INTERFACE

SIGNALS TO CONSOLE

SIGNALS FROM CONSOLE



7008864

CONSOLE CABLE; INDICATORS SLOT 12

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------------------------------------|--|---|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN. <i>[Signature]</i> DATE 6-25-71 | CHKD. <i>[Signature]</i> DATE 3/3/72 | digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small> | |
| DECIMALS .XXX = .005 XX = .02 .X = .1 | ENG. <i>[Signature]</i> DATE 3-3-72 | PROG. ENGS. <i>[Signature]</i> DATE 3-3-72 | | |
| ANGLES ±0° 30' | PROB. <i>[Signature]</i> DATE 3-15-72 | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | | | | |
| MATERIAL | NEXT HIGHER ASSY. | TITLE UNIBUS & CONSOLE CONTROL (UBCJ) | | |
| FINISH | | | | |
| | B-DD-KB11-0 | SIZE CODE | NUMBER | REV. |
| | | D | CSM8106-0-1 | P |
| | SCALE | SHEET 9 OF 14 | DIST. | |

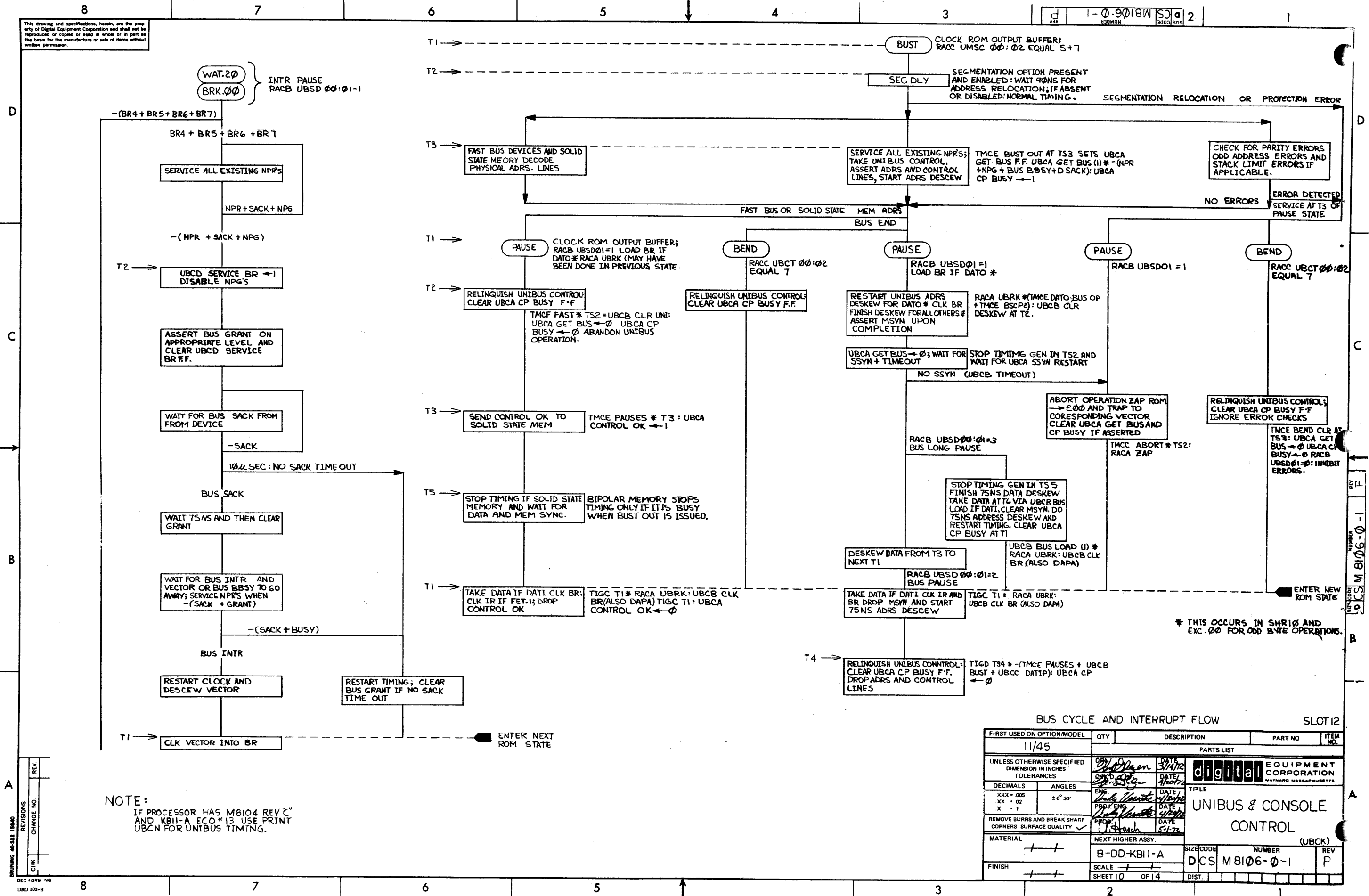
REV. 10/70
CHK

DEC FORM NO. 1 (REV. 10-70)

REV. P
 NUMBER 8106-0-1
 DCSM8106-0-1

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1-0-9018W SC 2



NOTE:
IF PROCESSOR HAS MB104 REV C
AND KB11-A ECO #13 USE PRINT
UBCN FOR UNIBUS TIMING.

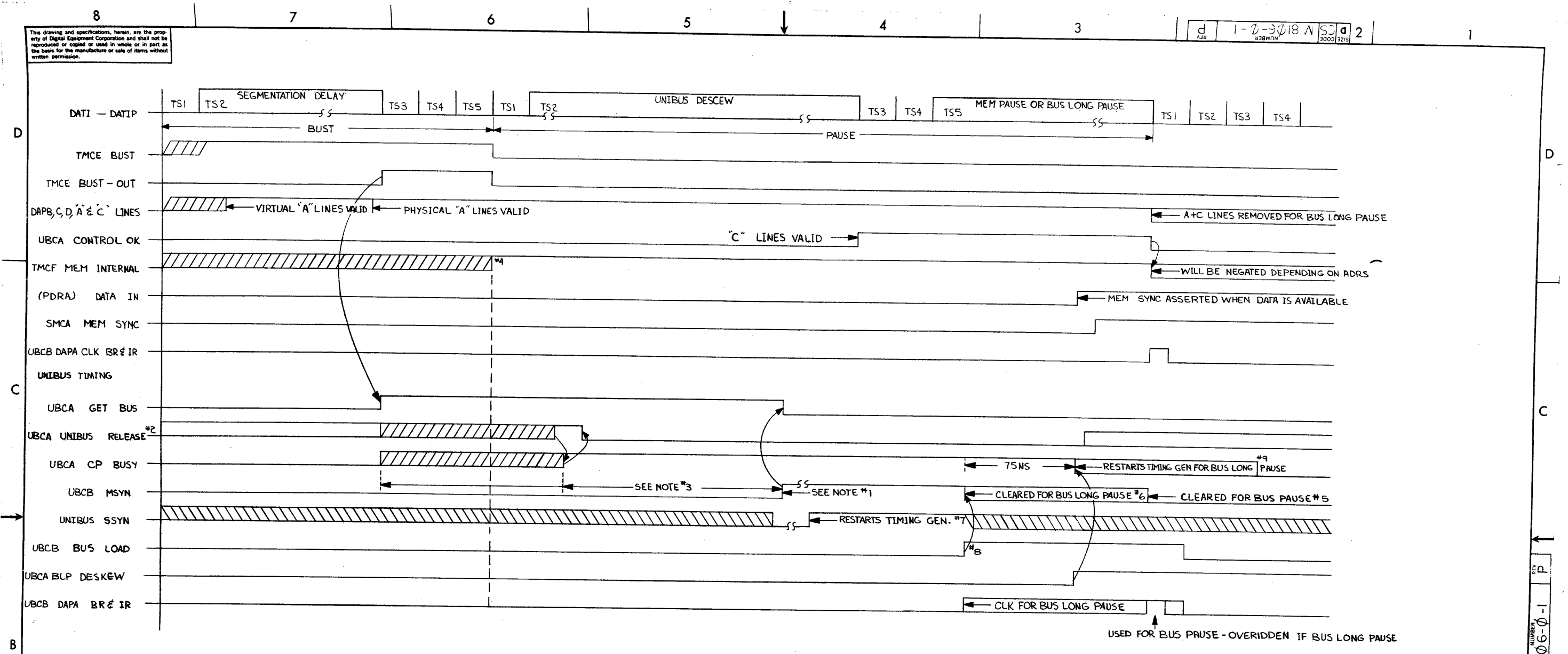
BUS CYCLE AND INTERRUPT FLOW SLOT 12

| FIRST USED ON OPTION/MODEL | QTY | DESCRIPTION | PART NO | ITEM NO. |
|---|----------|----------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DATE 3/1/72 | DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | DATE 4/1/72 | | |
| XXX + .005 | ± 0° 30' | DATE 4/1/72 | TITLE UNIBUS & CONSOLE CONTROL (UBCK) | |
| .XX + .02 | | DATE 5/1/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE 5/1/72 | MATERIAL B-DD-KB11-A | |
| | | DATE 5/1/72 | | |
| FINISH | | DATE | SIZE CODE | NUMBER |
| | | | DCS M 8106-0-1 | REV P |
| SHEET 10 OF 14 | | DIST. | | |

DEC FORM NO 8
 DRD 102-B
 REVISIONS
 CHANGE NO
 REV

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1-0-0018 N 2



1. MSYN IS NOT SET IF ODD ADRS, SEGMENTATION, PARITY OR STACK LIMIT ERROR HAS OCCURED. ERROR CONDITION RESTARTS TIMING GENERATOR AND ROM IS FORCED TO ZAP.
2. UNIBUS RELEASE = -(NPG + NPR + DSACK + BBSY)
3. MSYN IS SET 150 NS AFTER CP BUSY IS SET OR WHENEVER SSYN IS NOT PRESENT AFTER THE 150NS DESCEW
4. IF ADRS IS INTERNAL OR SOLID STATE MEMORY UNIBUS CNTL LOGIC IS CLEARED, DESCEW STOPPED, MSYN NOT ASSERTED.
5. BUS PAUSE - ADRS WILL NOT BE CHANGED IMMEDIATELY UPON EXITING PAUSE STATE

6. BUS LONG PAUSE - 75NS ADRS DESCEW AFTER NEGATION OF MSYN MUST BE DONE BEFORE TIMING GEN. RESTARTS AT T5 OF PAUSE CYCLE BECAUSE 'A' & 'C' LINES WILL CHANGE UPON EXITING PAUSE STATE.
7. IF NON-EXISTANT MEMORY, TIMEOUT RESTARTS CLOCK.
8. BUS LOAD IS SET ONE CLOCK AFTER T5 TO ALLOW COMPLETION OF WRITE TO SCRATCHPAD FOR PREVIOUS CYCLE BEFORE NEW IR #BR ARE LOADED
9. CLEARED 75NS AFTER MSYN → ∅: T4 FOR BUS PAUSE

NOTE:
IF PROCESSOR HAS M8104 REV C AND KB11-A ECO #13 USE PRINT UBCP FOR UNIBUS TIMING.

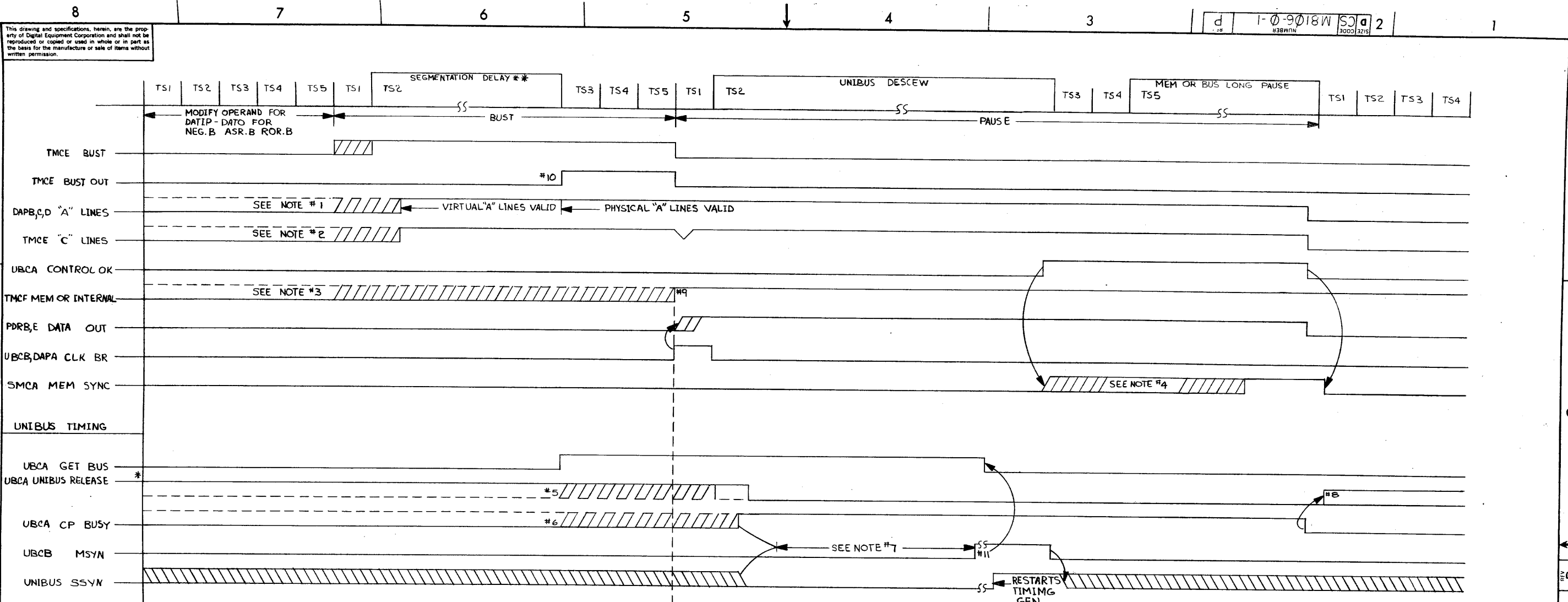
| | |
|-----|--|
| REV | |
| CHG | |
| CHK | |

DEC FORM NO DRD 102-B

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|------|---|----------|----------|
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE UNIBUS & CONSOLE CONTROL (UBCL) | | |
| DECIMALS | ANGLES | DATE | | | |
| .XXX = .005 | ±0° 30' | DATE | | | |
| XX = .02 | | DATE | | | |
| X = .1 | | DATE | MATERIAL NEXT HIGHER ASSY. B-DD-KB11-A SCALE SHEET 11 OF 14 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE | SIZE CODE NUMBER DCS M8106-0-1 REV. P | | |
| FINISH | | DATE | DIST. | | |

REV. NO. NUMBER DCS M8106-0-1 P

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- NOTES:**
- * UNIBUS RELEASE = -(NPR + NPG + BBSY + SACK)
 - ** TIMING GEN: PROVIDES DELAY EQUIVALENT TO 3 TIME STATES FOR RELOCATION OF ADDRESSES IF SEGMENTATION IS PRESENT AND ENABLED
 - 1. ADDRESS WILL NOT BE CHANGING IF DATO IS PRECEDED BY DATIP (DOTTED LINE SHOWS DATIP)
 - 2. CONTROL LINES WILL SHOW DATIP OR ELSE ARE INVALID UNTIL CONTROL OK
 - 3. MEM OR INTERNAL WILL BE TRUE UPON ENTERING DATO IF ADDRESS WAS SEMI CONDUCTOR MEMORY OR INTERNAL FROM PREVIOUS DATIP
 - 4. MEM SYNC IS ASSERTED BY SEMI CONDUCTOR MEMORY AS SOON AS DATA IS TAKEN-IF DATA IS TAKEN AND MEM SYNC ASSERTED PRIOR TO T5 OF THE PAUSE CYCLE TIMING GENERATOR IS NOT STOPPED IN T5
 - 5. UNIBUS RELEASE WILL NOT BE TRUE IF PREVIOUS OPERATION WAS A DATIP TO A UNIBUS ADDRESS.
 - 6. CP BUSY WILL BE ASSERTED UPON ENTRY INTO DATO IF PREVIOUS OPERATION WAS A DATIP TO A UNIBUS ADDRESS

- 7. DESKEW FOR "A" "C" "D" LINES IS 150NS STARTING WHEN CP BUSY IS SET AND SSYN FROM THE PREVIOUS BUS OPERATION IS NEGATED.
- 8. UNIBUS RELEASE BECOMES TRUE IF NO NPR DEVICE HAS BEEN GIVEN CONTROL OR IS REQUESTING PRIOR TO CP BSY GETTING CLEARED
- 9. IF ADDRESS IS SEMI CONDUCTOR MEMORY OR INTERNAL, UNIBUS LOGIC IS CLEARED DESKEW IS STOPPED AND MSYN IS NOT ASSERTED.
- 10. BUST OUT IS INHIBITED IN IRD~~00~~ FOR CONDITIONAL BUST(MSC=5) IF BIN * SM123 + BR INSTR * BRQ TRUE + DM123 * -(BIN * SM6 + BR INSTR)
- 11. MSYN IS NOT SET IF AN ODD ADRS, STACK LIMIT RED SEGMENTATION OR PARITY ERROR HAS OCCURED

NOTE:
1. ALL SIGNALS ARE SHOWN TRUE WHEN HIGH

NOTE:
IF PROCESSOR HAS M8104 REV C" AND KB11-A ECO #13 USE PRINT UBCP FOR UNIBUS TIMING.

DATO TIMING DIAGRAM

SLOT 12

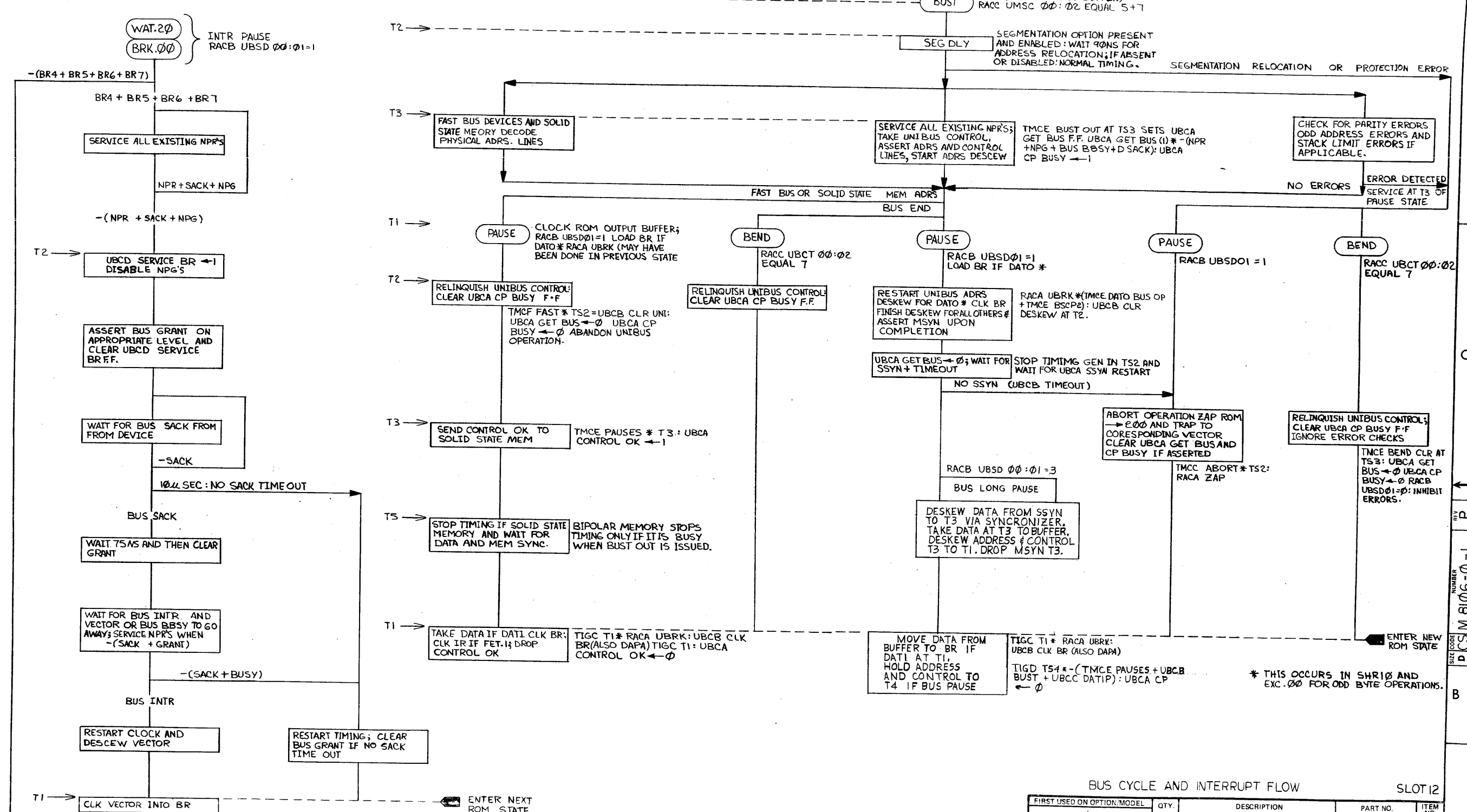
BRUNING 40-522 15840
 DEC FORM NO DRD 102-B
 REVISIONS
 CHK CHANGE NO
 REV

NUMBER
 SIZE CODE
 DCS M 8106-0-1
 REV
 P

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE 3/2/72 | digital EQUIPMENT CORPORATION <small>NATYARD MASSACHUSETTS</small> | |
| DECIMALS | ANGLES | DATE 4/2/72 | | |
| .XXX = .005 | ±0° 30' | DATE 4/2/72 | | |
| .XX = .02 | | DATE 4/2/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE 5-1-72 | UNIBUS & CONSOLE CONTROL (UBCM) | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | B-DD-KB11-A | | |
| | | SCALE | | |
| | | SHEET 12 OF 14 | SIZE CODE DCS M 8106-0-1 NUMBER REV. P. | |

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1-0-9018M SC 2
838MIN 3000 3215



BUS CYCLE AND INTERRUPT FLOW SLOT 12

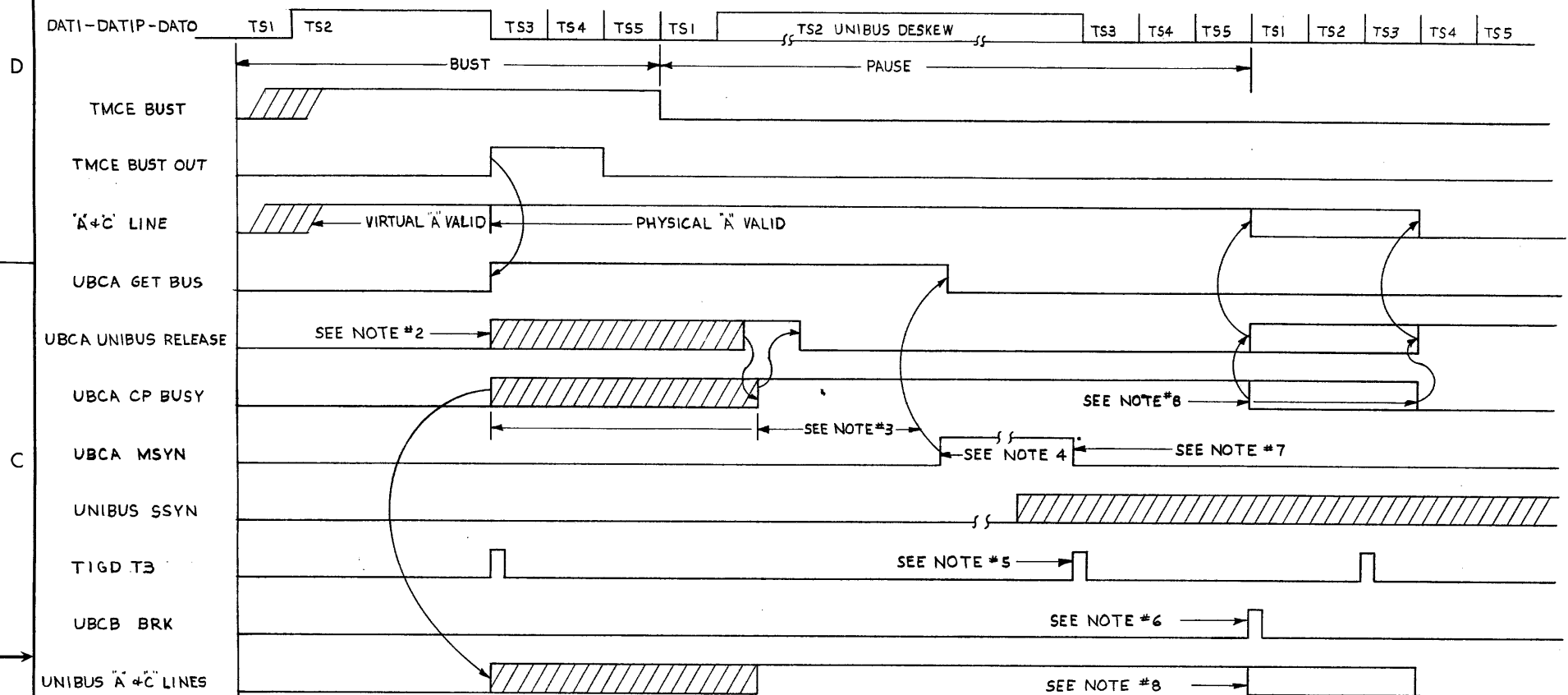
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|----------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. | | DATE 3/1/72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| TOLERANCES | | DATE 4/20/72 | | |
| DECIMALS | ANGLES | DATE 4/20/72 | TITLE UNIBUS & CONSOLE CONTROL (UBCN) | |
| .XXX - .005 | ± 0° 30' | DATE 5-1-72 | | |
| XX - .02 | | DATE | SIZE CODE NUMBER REV. DCS M8106-0-1 P | |
| X - .1 | | DATE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE | SCALE OF 1 | |
| | | DATE | | |
| MATERIAL | NEXT HIGHER ASSY. | SHEET 13 OF 14 | | |
| FINISH | B-DD-KB11-A | | | |

| REV | CHG | NO | DATE |
|-----|-----|----|------|
| | | | |

BRUNING 40-522 15840
DEC FORM NO DRD 102-B

SIZE CODE NUMBER
DCS M8106-0-1 P

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- NOTES:
- #1 MSYN IS NOT SET IF ODD ADDRESS, KTIIC, PARITY OR STACK LIMIT HAS OCCURED. ERROR CONDITION RESTARTS TIMING GEN. AND ROM IS FORCED TO ZAP.00
 - #2 UNIBUS RELEASE = -(NPG + NPR + SACK + B BUSY)
 - #3 MSYN IS SET 150 NS AFTER CP BUSY OR WHENEVER SSYN IS NOT PRESENT AFTER 150 NS DESKEW.
 - #4 IF ADRS IS INTERNAL OR SOLID STATE MEMORY UNIBUS CONTROL LOGIC IS CLEARED, DESKEW STOPPED, MSYN NOT ASSERTED.
 - #5 T3 STROBES UNIBUS DATA TO BUS BUFFER REGISTER EVERY T3. FOR DATI-DATIP THE BR CLOCK IS NEXT T1
 - #6 BRK IS DEPENDENT ON ROM TO LOAD BUS TO BR.
 - #7 T5 NS DESKEW FOR MSYN IS OBTAINED BY THE FACT THAT SSYN MUST GO THROUGH 2 RANKS OF SYNCHRONIZATION
 - #8 FOR BUS LONG PAUSE ADDRESS + CONTROL IS DESKEWED FROM T3 TO T1. FOR BUS PAUSE THEY ARE HELD TO TS4 OF THE NEXT ROM CYCLE.

| | |
|-----|-----|
| REV | NO. |
| CHK | NO. |

DEC FORM 105 DRD 102 C

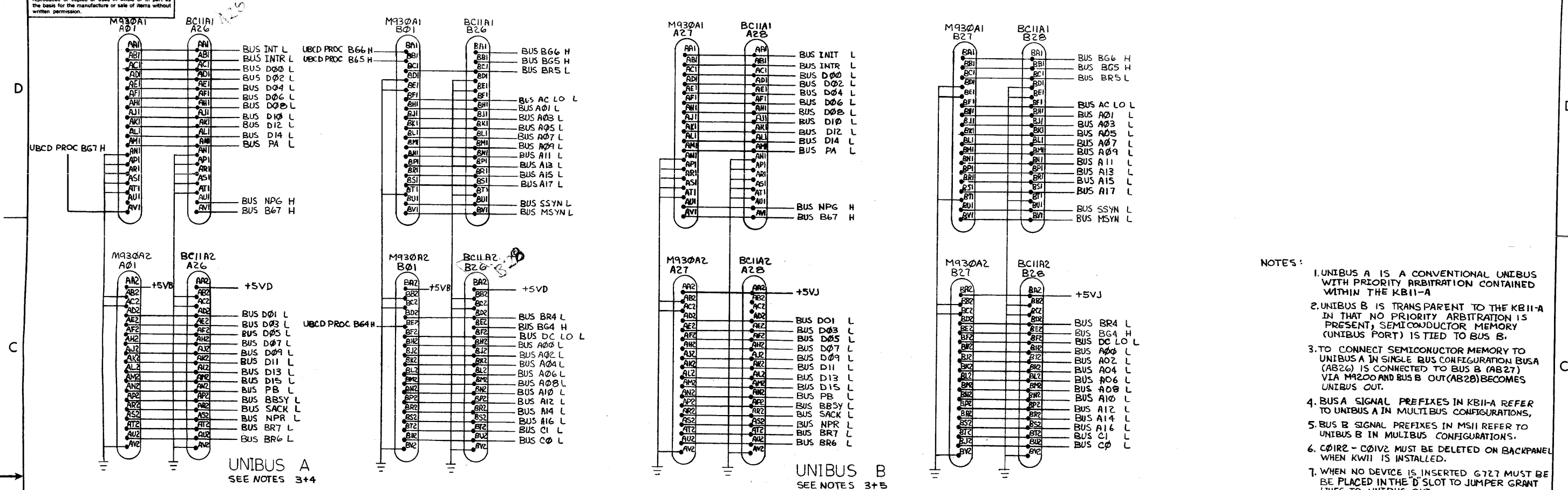
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|--|----------------|-----------------------|--------------|--|-----------|
| FIRST USED ON OPTION/MODEL 11/45 | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | | DRN. R. Hale | DATE 5/24/73 | TITLE UNIBUS & CONSOLE CONTROL (UBCP) | |
| TOLERANCES | | CHK'D. R. Hale | DATE 5/24/73 | | |
| DECIMALS .xxx = .005 | ANGLES ±0° 30' | ENG. Alan Helms | DATE 5/24/73 | | |
| .xx = .02 | | PROJ. ENG. Alan Helms | DATE 5/24/73 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V | | PROD. A. Huski | DATE 5/10/73 | SCALE SHEET 14 OF 14 | |
| MATERIAL | | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | | B-DD-KBII-A | | D CS | M8106-0-1 |
| | | | | REV. | P |

D CS M8106-0-1 P

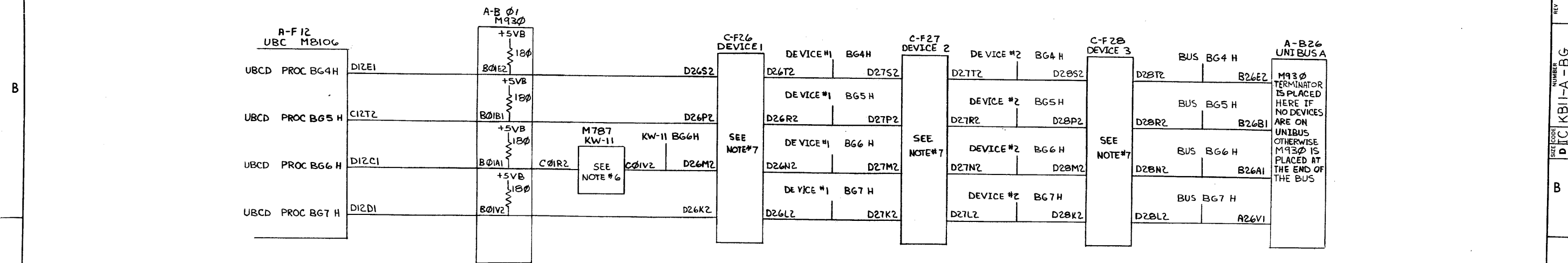
B

A

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- NOTES:
- UNIBUS A IS A CONVENTIONAL UNIBUS WITH PRIORITY ARBITRATION CONTAINED WITHIN THE KB11-A
 - UNIBUS B IS TRANSPARENT TO THE KB11-A IN THAT NO PRIORITY ARBITRATION IS PRESENT; SEMICONDUCTOR MEMORY (UNIBUS PORT) IS TIED TO BUS B.
 - TO CONNECT SEMICONDUCTOR MEMORY TO UNIBUS A IN SINGLE BUS CONFIGURATION BUS A (A26) IS CONNECTED TO BUS B (A27) VIA M930 AND BUS B OUT (A28) BECOMES UNIBUS OUT.
 - BUS A SIGNAL PREFIXES IN KB11-A REFER TO UNIBUS A IN MULTIBUS CONFIGURATIONS.
 - BUS B SIGNAL PREFIXES IN MS11 REFER TO UNIBUS B IN MULTIBUS CONFIGURATIONS.
 - C01R2 - C01V2 MUST BE DELETED ON BACKPANEL WHEN KW11 IS INSTALLED.
 - WHEN NO DEVICE IS INSERTED G727 MUST BE PLACED IN THE 'D' SLOT TO JUMPER GRANT LINES TO UNIBUS OUT.

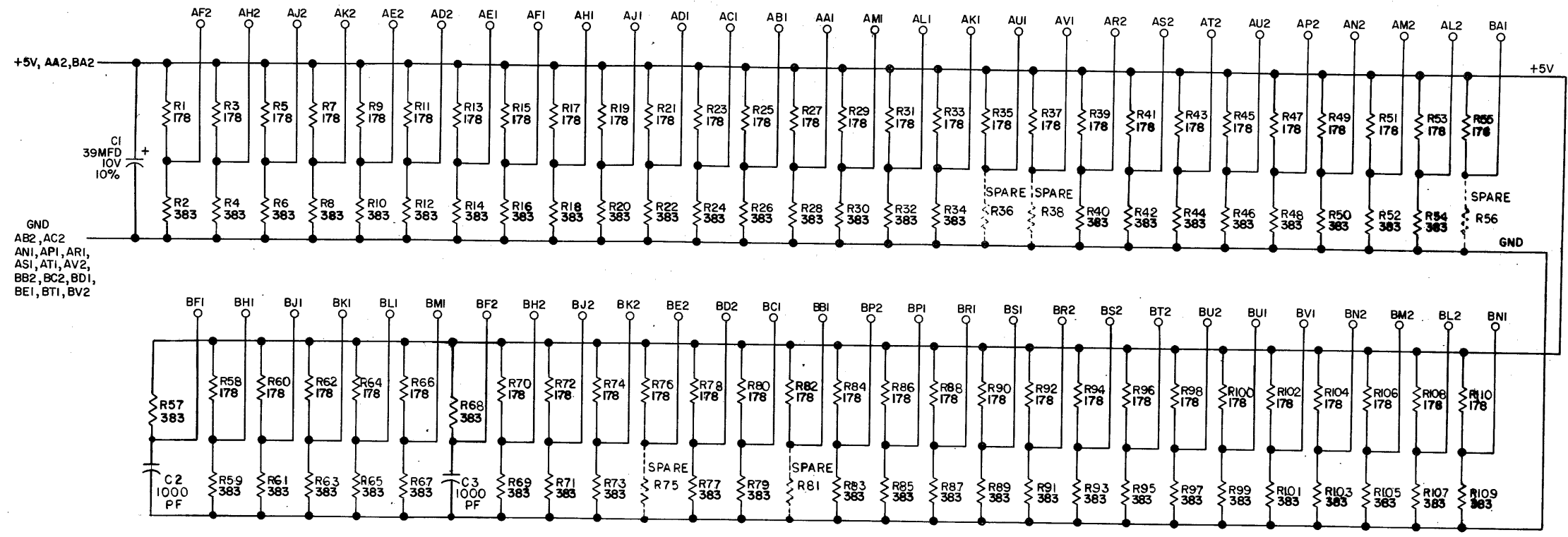


| | | |
|------|----|------|
| REV | NO | DATE |
| CHK | | |
| CHG | | |
| REV | | |
| NO | | |
| DATE | | |

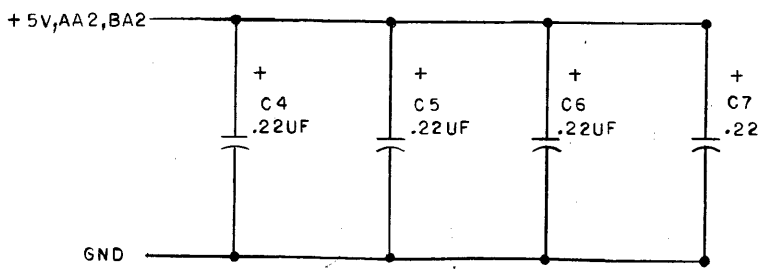
DEC 1082-8

| | | | | |
|--|-------------------|---|--|----------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS .XXX = .005 .XX = .02 .X = .1 | ANGLES ±0° 30' | DATE 3/0/72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | DATE 4/21/72 | TITLE BUS CABLES AND GRANT CHAIN (BUS) | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE D I C | NUMBER KB11-A-BG | REV |
| FINISH | SCALE | SHEET 1 OF 1 | DIST. | |

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UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 1%
CAPACITORS ARE .001UF, 250V, 20%



REV. D
NUMBER M930-0-1
SIZE CODE C CS

| REV. | DATE | BY | CHKD. |
|------|----------|--------|-------|
| 1 | 11-11-69 | BUTLER | |
| 2 | 12-3-69 | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

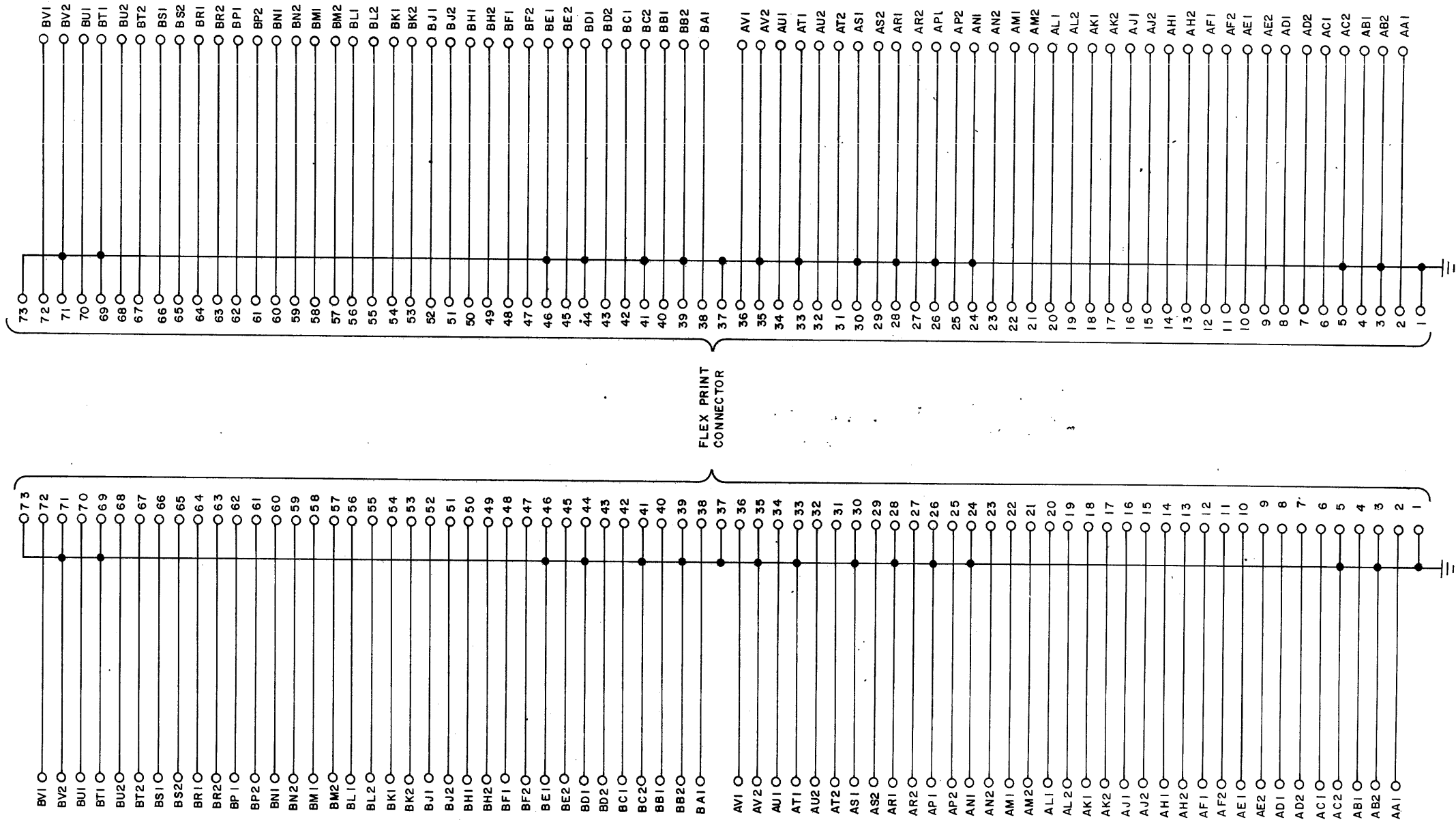
| REV. | DATE | BY | CHKD. |
|------|----------|--------|-------|
| 1 | 11-11-69 | BUTLER | |
| 2 | 12-3-69 | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

| DRN. | DATE | TRANSISTOR & DIODE CONVERSION CHART |
|--------|----------|-------------------------------------|
| BUTLER | 11-11-69 | DEC EIA DEC EIA |
| | | |
| | | |
| | | |
| | | |

| | | | | | |
|----------------------|------|-----------------------|------|------------------------|--|
| digital | | EQUIPMENT CORPORATION | | MAYNARD, MASSACHUSETTS | |
| SIZE | CODE | NUMBER | REV. | | |
| C | CS | M930-0-1 | D | | |
| PRINTED CIRCUIT REV. | | | D | | |

DIST. 324,434,435 3 PINK

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| REV. | CHK | CHK | CHK |
|-------|-----|-----|-----|
| 00001 | A | | |
| 00002 | B | | |

DEC. FORM NO. DRP-102

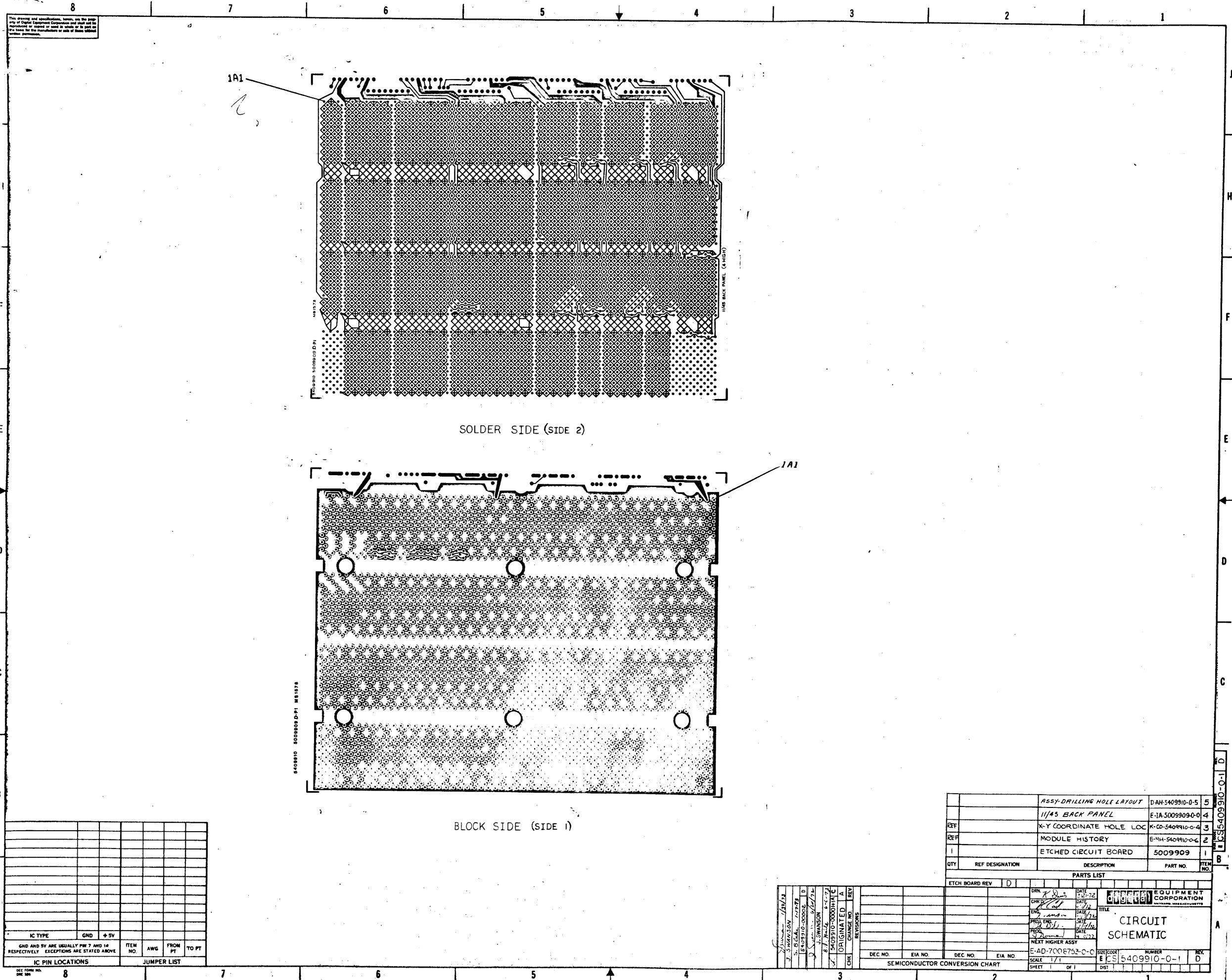
| DRN | DATE |
|--------------------|---------|
| <i>[Signature]</i> | 11-6-69 |
| <i>[Signature]</i> | 11-6-69 |
| <i>[Signature]</i> | 3-17-70 |
| <i>[Signature]</i> | 3/26/70 |

| TRANSISTOR & DIODE CONVERSION CHART | | | |
|-------------------------------------|-----|-----|-----|
| DEC | EIA | DEC | EIA |
| | | | |
| | | | |
| | | | |

digital
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

| TITLE | | | |
|------------------------|------|----------|------|
| INTERNAL BUS CONNECTOR | | | |
| M920 | | | |
| SIZE | CODE | NUMBER | REV. |
| C | CS | M920-0-1 | B |
| PRINTED CIRCUIT REV. | | | |
| B | | | |

SIZE CODE NUMBER REV.
C CS M920-0-1 B



SOLDER SIDE (SIDE 2)

BLOCK SIDE (SIDE 1)

| IC PIN LOCATIONS | | | | JUMPER LIST | | | |
|------------------|-----|-----|----------|-------------|---------|-------|--|
| IC TYPE | GND | +5V | ITEM NO. | AWG | FROM PT | TO PT | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

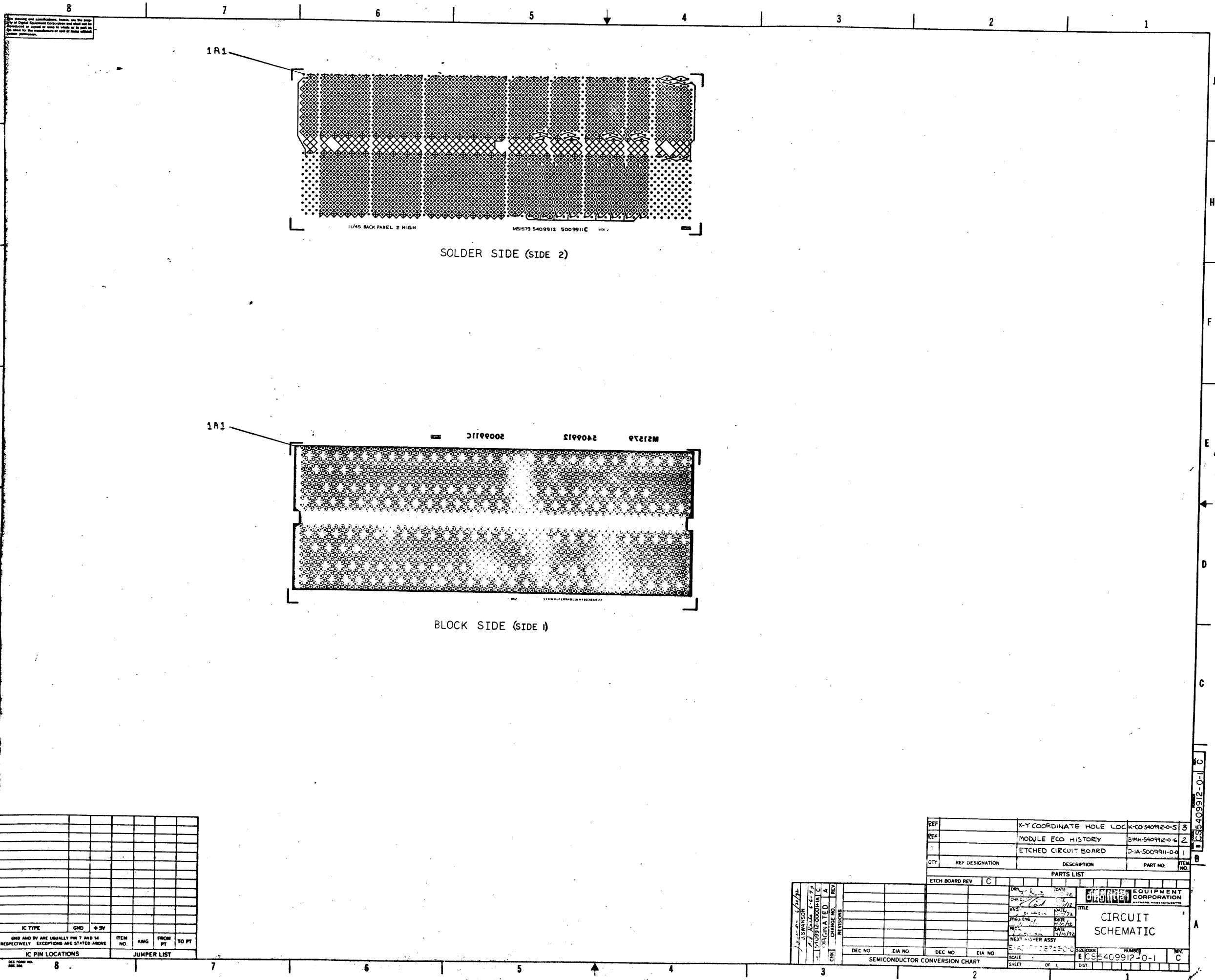
| | | | |
|-------------------------------------|-----------------|-----------------------------|---------|
| DESIGNER J. SWANSON | DATE 1/16/72 | DRN X-20 | |
| CHECKER S. B. GILBERT | DATE 1/22/72 | CHK S. B. GILBERT | |
| PROJ. ENG. R. SWANSON | DATE 1/17/72 | PROJ. ENG. R. SWANSON | |
| ORIGINATOR A. SACOSTO-COORDINATE | DATE 1/17/72 | PROJ. ENG. S. B. GILBERT | |
| CHG. NO. | REV. NO. | | |
| | | | |
| DEC. NO. | EIA NO. | DEC. NO. | EIA NO. |
| | | | |
| | | | |

| | | | |
|---------|-------|-------|----|
| DATE | SCALE | SHEET | OF |
| 1/22/72 | 1/1 | 1 | 1 |

| | | | |
|-----------------------|-----------------------|-------------------|--|
| EQUIPMENT CORPORATION | | CIRCUIT SCHEMATIC | |
| SIZE CODE ECS | NUMBER 5409910-0-1 | REV. D | |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|---------------------------|-------------------|----------|
| | | ASSY-DRILLING HOLE LAYOUT | D-AH-5409910-0-5 | 5 |
| | | 11/45 BACK PANEL | E-1A-50099090-0-4 | 4 |
| | | X-Y COORDINATE HOLE LOC | K-CD-5409910-0-4 | 3 |
| | | MODULE HISTORY | B-MH-5409910-0-2 | 2 |
| 1 | | ETCHED CIRCUIT BOARD | 5009909 | 1 |

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| IC TYPE | GND | +5V | ITEM NO. | AWG | FROM PT. | TO PT. |
|------------------|-----|-----|----------|-----|----------|--------|
| IC PIN LOCATIONS | | | | | | |
| JUMPER LIST | | | | | | |

| | | | | |
|-----|----------------------|------------------|-----------------|---|
| REF | X-Y COORDINATE | HOLE LOC | K-CD 540912-0-5 | 3 |
| REF | MODULE ECO HISTORY | SMH-540912-0-4 | 2 | |
| 1 | ETCHED CIRCUIT BOARD | D-1A-5009911-0-0 | 1 | |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|-------------|----------|----------|
| | | | | |

ETCH BOARD REV **C**

| | | | |
|------|---------|-----------|--|
| DATE | 2/72 | DRN | |
| CHK | | ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |
| DATE | 4/12/72 | PROJ ENGR | |

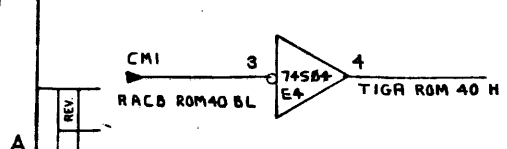
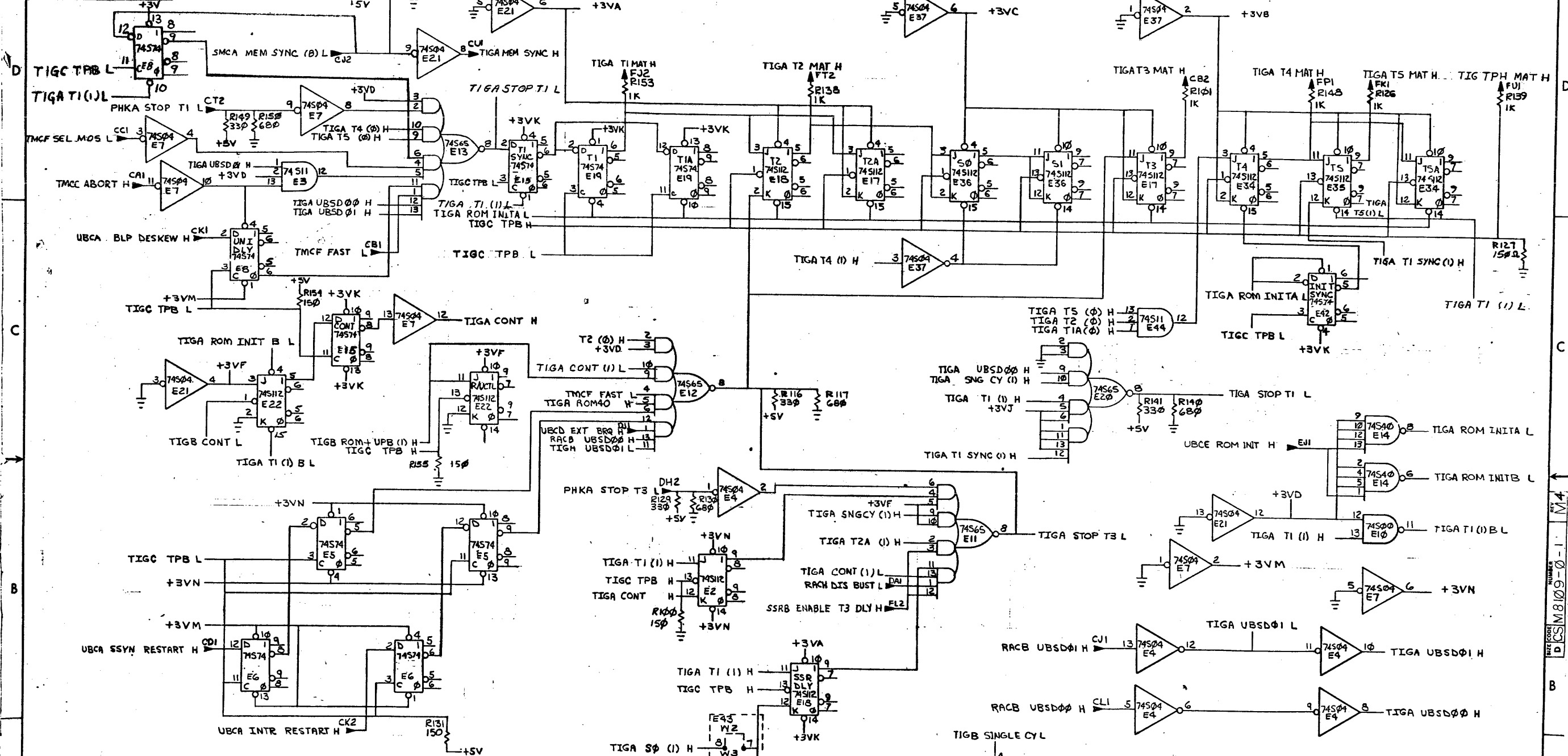
SEMICONDUCTOR CONVERSION CHART

| | | | |
|--------|-----------|--------|--------|
| DEC NO | EIA NO | DEC NO | EIA NO |
| SCALE | SIZE CODE | NUMBER | REV |
| SHEET | OF | 1 | C |

| | |
|-------------|------|
| DESIGNED BY | DATE |
| CHANGED BY | DATE |
| REVISIONS | |

MS1579 5409912-0-1 C

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REVISIONS

| REV | NO. | DESCRIPTION |
|-----|-----|---------------|
| 1 | 1 | INITIAL ISSUE |

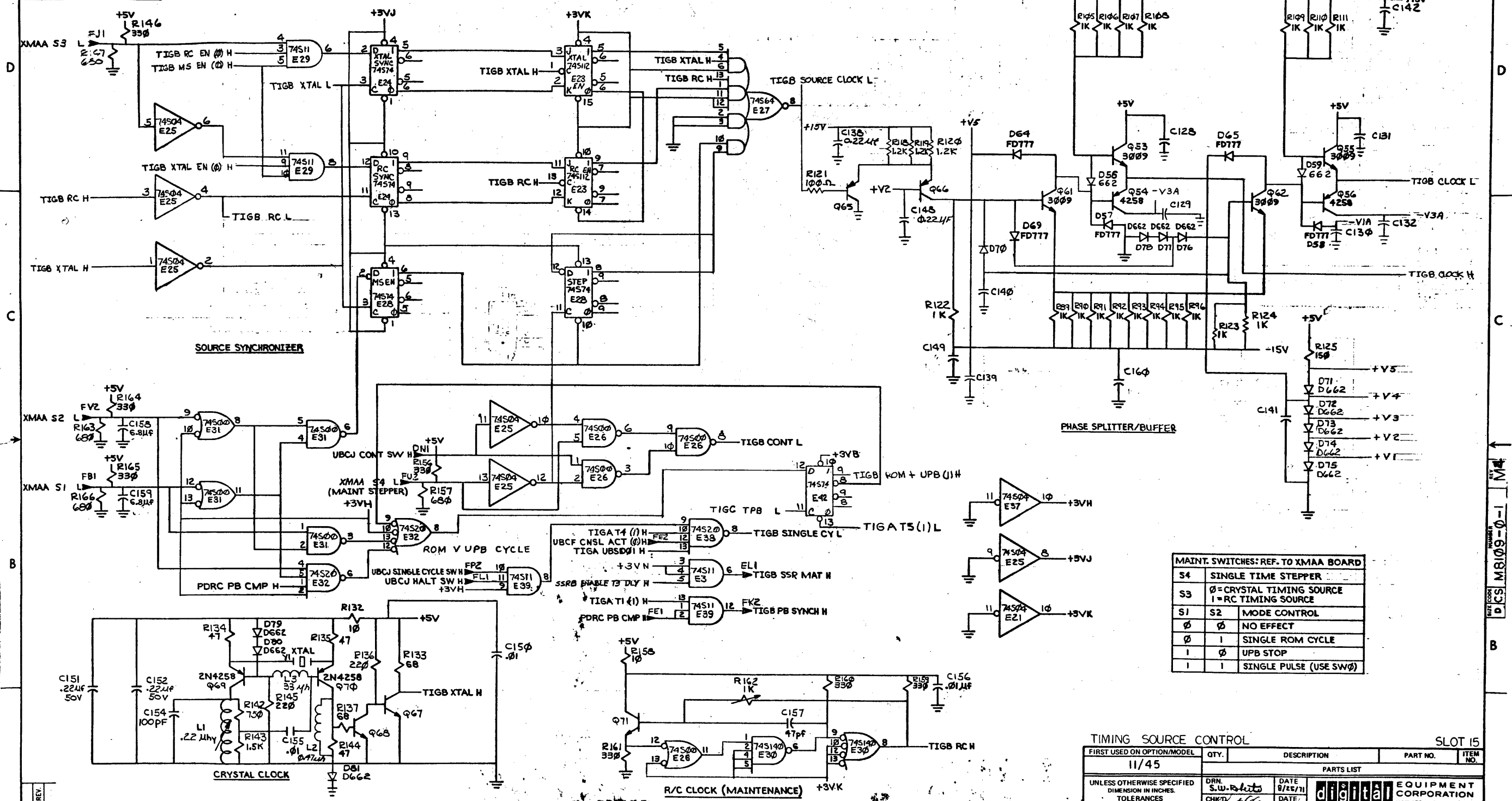
CAUTION
NON-STANDARD DRAWING
FOR SPECIAL APPLICATION

TIMING GENERATOR CONTROL SLOT 15

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|------|-------------|----------|----------|
| 11/45 | | | | |

| PARTS LIST | | TITLE | |
|---|---|--|-------------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRY: [Signature] CHK'D: [Signature] DATE: 8/25/72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | TIMING GENERATOR (TIGA) |
| DECIMALS .XXX - .005 | ANGLES 2° 30' | DATE 4/25/72 | REV. MA |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROG. ENG. [Signature] DATE 4/25/72 | DATE 4/21/72 | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER |
| FINISH | B-DD-KB11-0 | D/CSM8109-0-1 | REV. MA |
| | SCALE | SHEET 2 OF 6 | DIST. |

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MAINT. SWITCHES: REF. TO XMAA BOARD

| S4 | S3 | S1 | S2 | MODE CONTROL |
|----|----|----|----|------------------------|
| 0 | 0 | 0 | 0 | NO EFFECT |
| 0 | 1 | 0 | 0 | SINGLE ROM CYCLE |
| 1 | 0 | 0 | 0 | UPB STOP |
| 1 | 1 | 1 | 1 | SINGLE PULSE (USE SW0) |

TIMING SOURCE CONTROL

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------------------------|-----------------|---|-----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN S.W. <i>Relets</i> | DATE 8/25/71 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS .005 .XX - .02 .X - .1 | CHK'D <i>Relets</i> | DATE 4/20/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | ENG. <i>Relets</i> | DATE 4/20/72 | TITLE TIMING GENERATOR | |
| | PROD. <i>Relets</i> | DATE 4-21-72 | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE/CODE | NUMBER | (TIGB) |
| FINISH | B-DD-KB11-0 | SCALE | DCS M8109-0-1 | REV M4 |
| | SHEET 3 OF 6 | DIST. | | |

NOTE: ALL PNP TRANSISTORS ARE DEC 3009B AND ALL PNP TRANSISTORS ARE DEC 425B UNLESS OTHERWISE NOTED. ALL DIODES ARE TYPE FD771 ALL CAPS ARE .22UF 50V MONOLITHIC UNLESS OTHERWISE INDICATED.

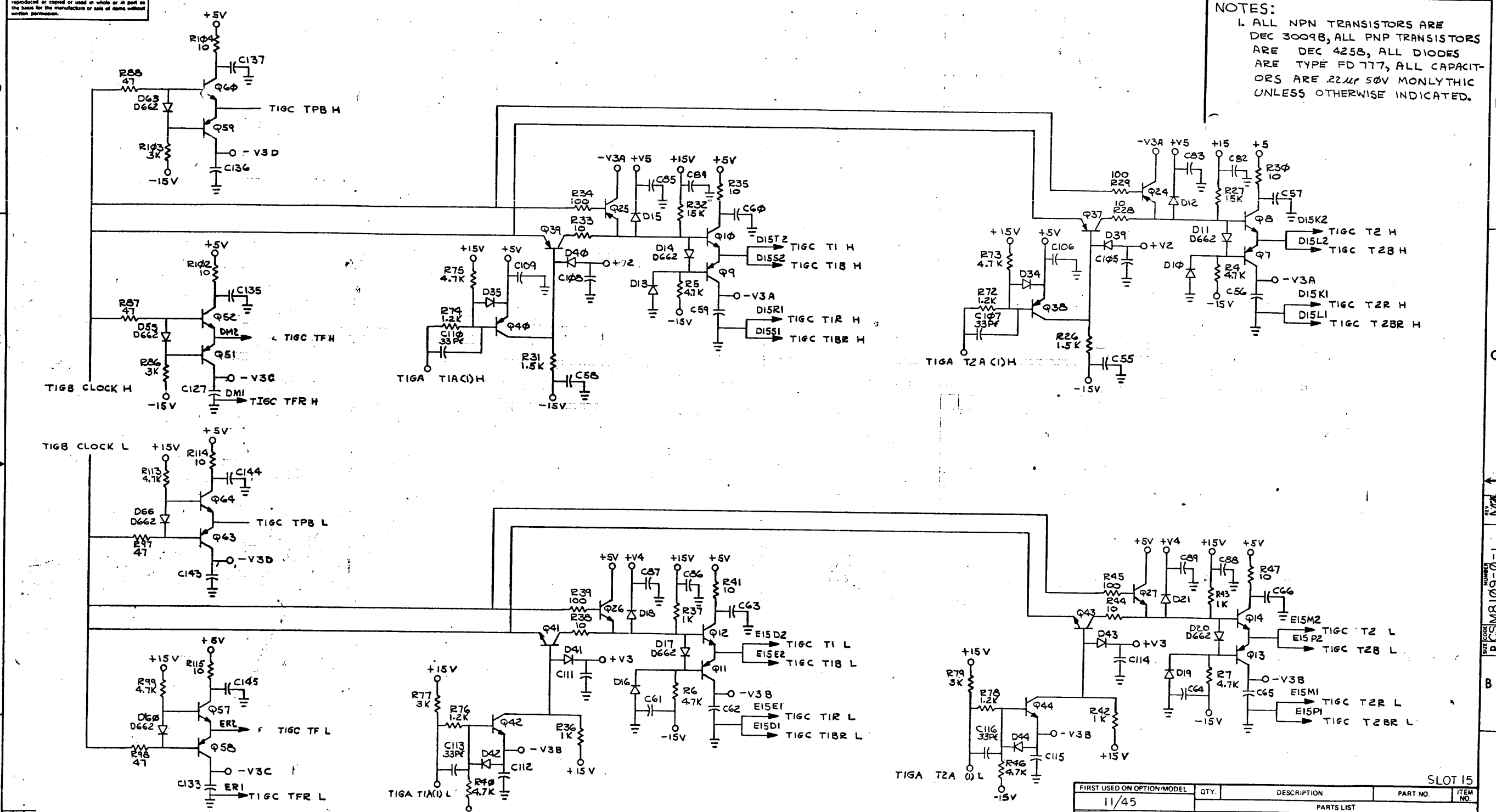
DO NOT USE FOR OTHER APPLICATION

| REV. | CHANGE NO. |
|------|------------|
| | |

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1-0-6018WSD 2

NOTES:
 1. ALL NPN TRANSISTORS ARE DEC 3009B, ALL PNP TRANSISTORS ARE DEC 425B, ALL DIODES ARE TYPE FD 777, ALL CAPACITORS ARE .22UF 50V MONOLITHIC UNLESS OTHERWISE INDICATED.



CAUTION
 NON-STANDARD DRAWING
 FOR SPECIAL APPLICATION

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|----------|-------------------|---------------|--|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN | DATE | DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS |
| DECIMALS | ANGLES | CHK'D | DATE | |
| XXX - .005 | ± 0° 30' | DESIGNED | DATE | |
| .XX - .02 | | ENG | DATE | |
| .X - .1 | | PROD. ENG | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. | DATE | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | B-DD-KB11-0 | | |
| | | SCALE | SIZE CODE | NUMBER |
| | | SHEET 4 OF 6 | DCS M8109-0-1 | M4 |
| | | DIST | | |

| REV | NO | DESCRIPTION |
|-----|----|-------------|
| | | |
| | | |

DEC 10 1972
 DRD 108-B

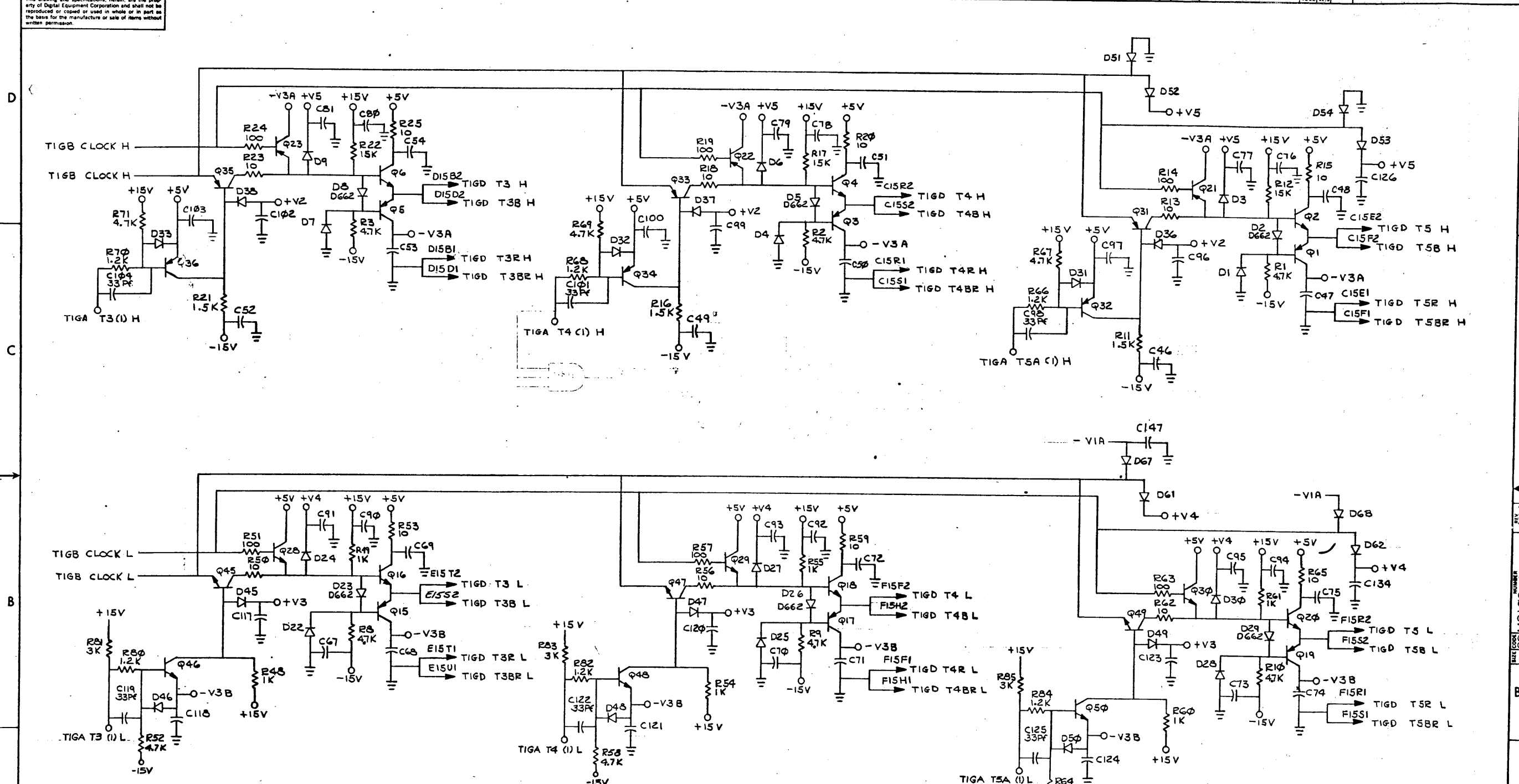
REV. M4
 DCS M8109-0-1

SLOT 15

TITLE
 TIMING GENERATOR (TIGC)

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1-0-6018WSD 2



CAUTION
NON-STANDARD DRAWING
FOR SPECIAL APPLICATION

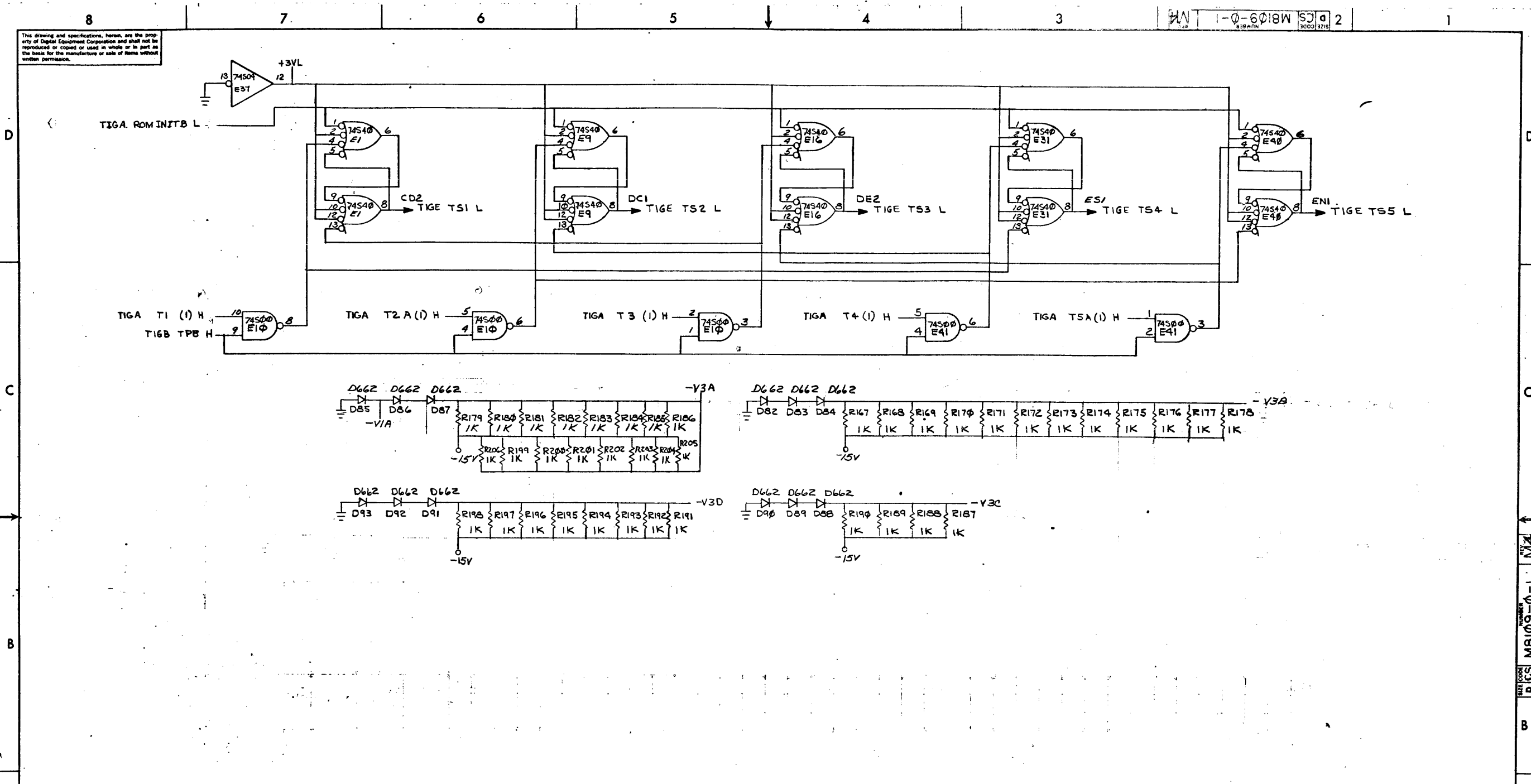
NOTE:
 ALL NPN TRANSISTORS ARE DEC 3009B,
 ALL PNP TRANSISTORS ARE DEC 425B,
 ALL DIODES ARE TYPE FD777 ALL CAPACITORS
 ARE .22 MF MONBYTHIC UNLESS OTHERWISE
 INDICATED.

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|--------------------------|-----------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN A. Davis | DATE 3-1-72 | DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS | CHK'D D. J. [unclear] | DATE 4/20/72 | | |
| .XXX - .005 | ENG D. J. [unclear] | DATE 4/20/72 | | |
| .XX - .02 | PRD D. J. [unclear] | DATE 4-20-72 | | |
| .X - .1 | PRQD D. J. [unclear] | DATE 4-21-72 | TIMING GENERATOR (TIGD) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | DCS M8109-0-1 | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
| FINISH | | SCALE | | |
| | | SHEET 5 OF 6 | DIST. | |

| REV | REVISIONS |
|-----|-----------|
| | |
| | |
| | |

DEC FORM NO. DAD 102-B

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CAUTION
NON-STANDARD DRAWING
FOR SPECIAL APPLICATION

| FIRST USED ON OPTION/MODEL | | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------------------|-------------|----------|----------|
| 11/45 | | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | PARTS LIST | | | |
| DECIMALS | ANGLES | TITLE | | | |
| .XXX - .005 | 2° - 30' | TIMING GENERATOR (TIGE) | | | |
| .XX - .02 | | REV. M4 | | | |
| .X - .4 | | SIZE CODE | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | NUMBER | | | |
| MATERIAL | NEXT HIGHER ASSY. | DCS M8109-0-1 | | | |
| FINISH | B-DD-KB11-0 | REV. M4 | | | |
| | SCALE | SHEET 6 OF 6 | | | |
| | | DIST. | | | |

| REV. | CHANGE NO. | DATE |
|------|------------|------|
| | | |

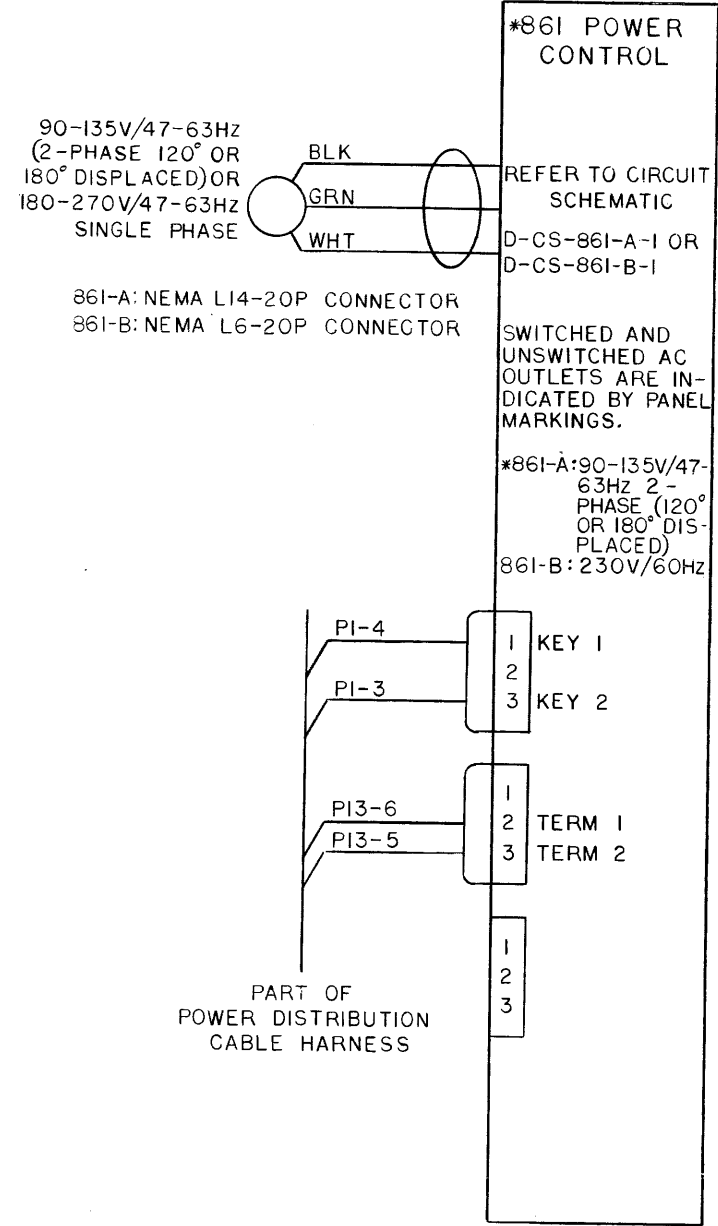
M4
 M8109-0-1
 DCS
 M4

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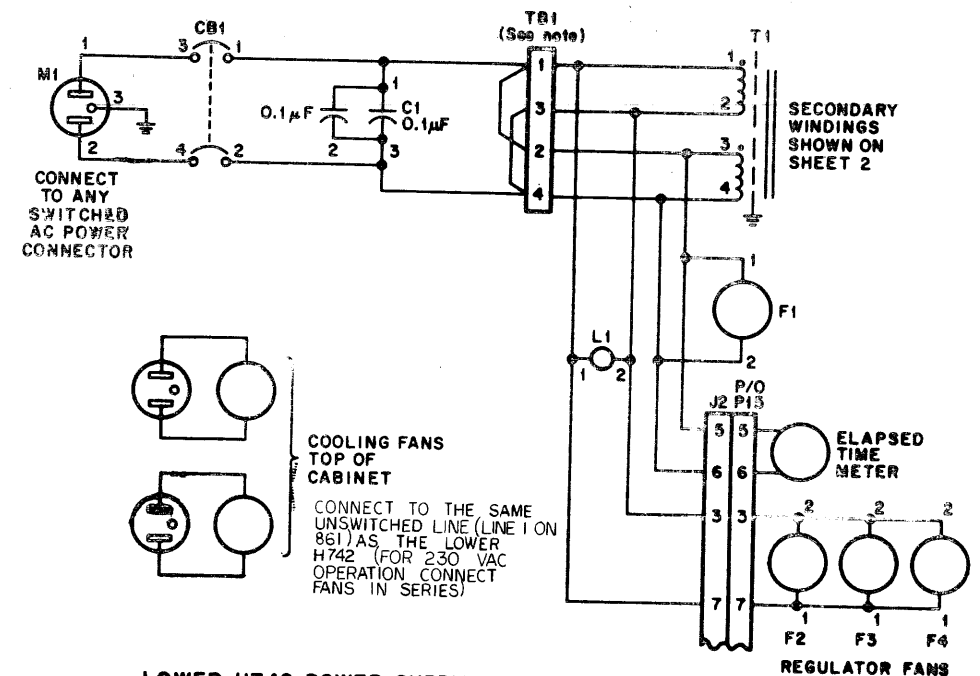
11/45-0111 2

NOTE

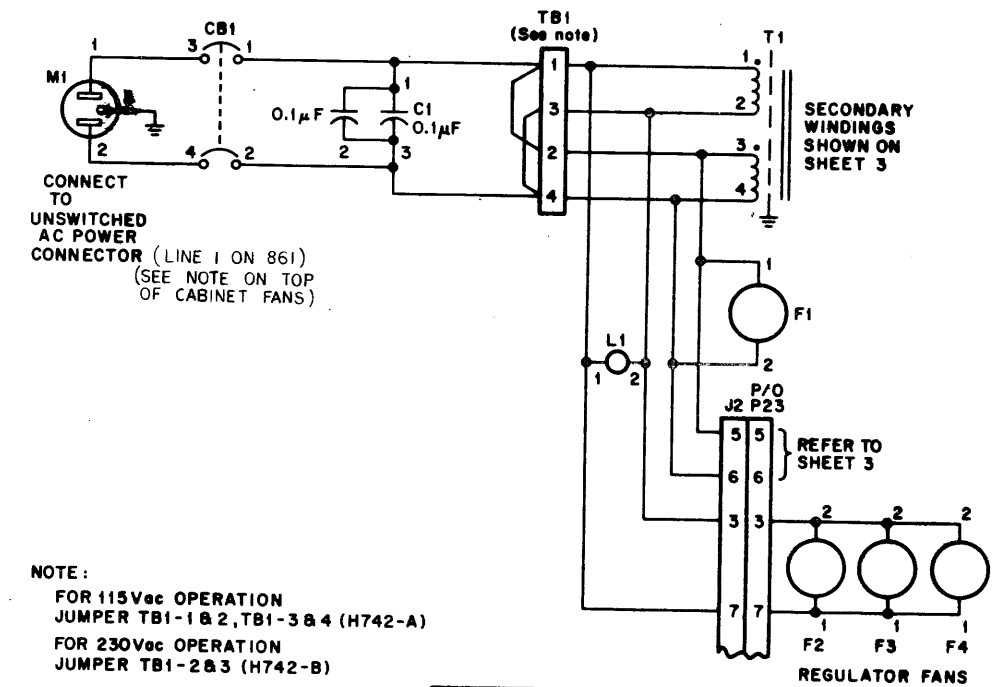
1. FOR 11/45 SYSTEMS BUILT WITH 860 POWER CONTROLS, REFER TO D-IC-11/45-0-1 REV. A DRAWING.



UPPER H742 POWER SUPPLY
REFER TO D-CS-H742-0-1



LOWER H742 POWER SUPPLY



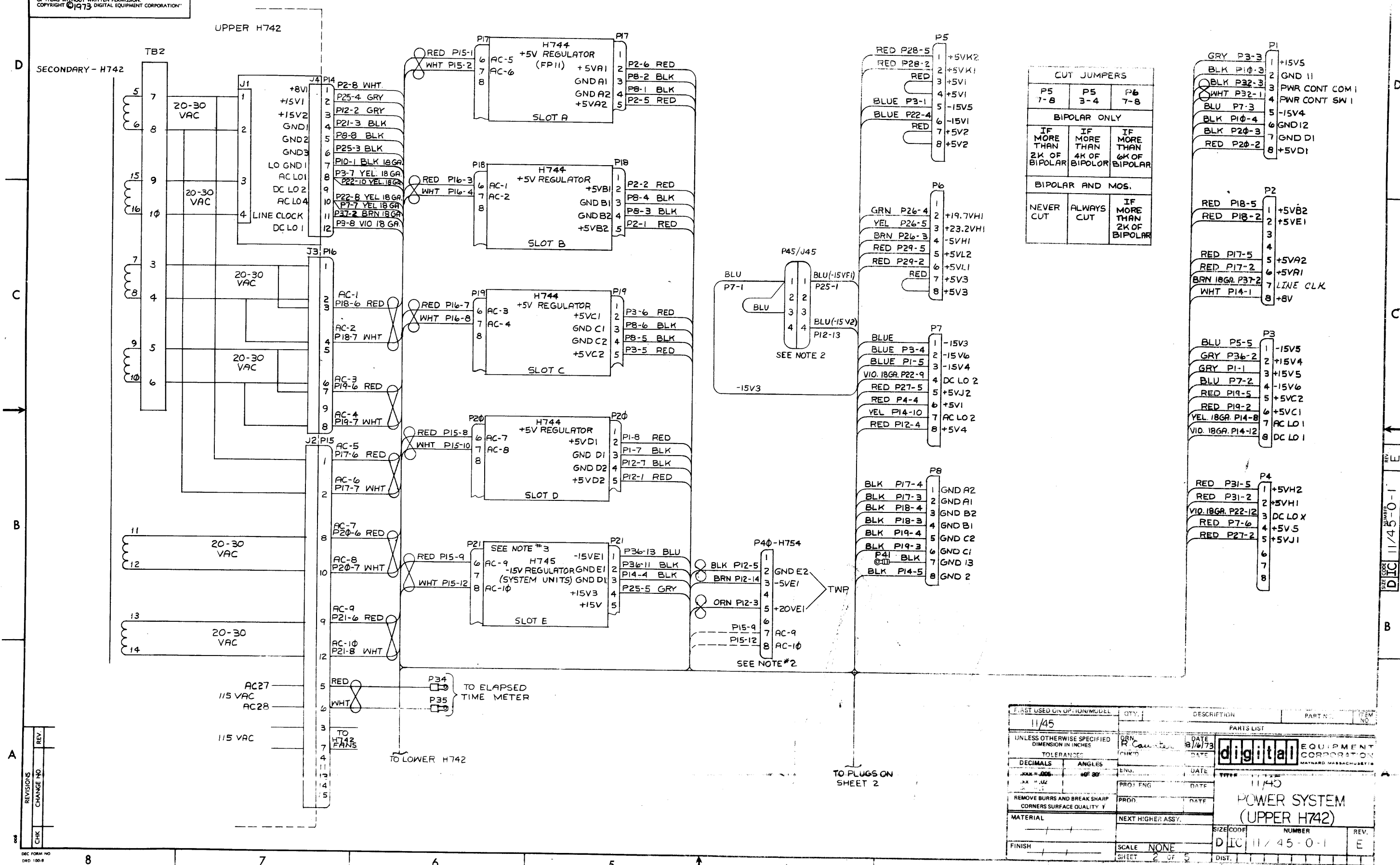
NOTE:
FOR 115V_{ac} OPERATION
JUMPER TB1-1 & 2, TB1-3 & 4 (H742-A)
FOR 230V_{ac} OPERATION
JUMPER TB1-2 & 3 (H742-B)

| CHK | CHANGE NO | REV |
|---------|-------------|-----|
| PM | 11/45-00031 | A |
| SWANSON | | |
| | 11/45-00047 | B |
| | | |
| | 11/45-00052 | C |
| | | |
| | 11/45-00054 | D |
| | | |
| | 11/45-00057 | E |
| | | |
| | 11/45-00058 | F |
| | | |

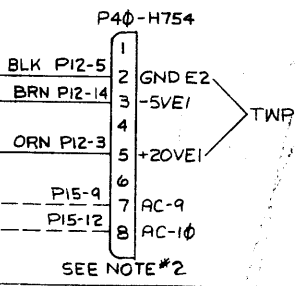
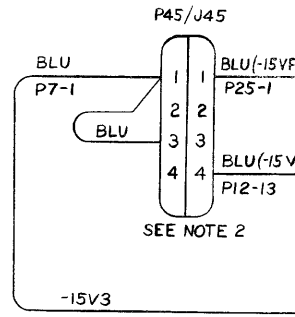
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|--------------|--|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | DATE | TITLE POWER SYSTEMS CONFIGURATION | |
| .XXX = .005 | ±0° 30' | DATE | | |
| .XX = .02 | | DATE | | |
| .X = .1 | | DATE | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | B-DD-11/45-0 | | DIC 11/45-0-1 | REV. E |
| SCALE | | SHEET 1 OF 5 | DIST. | |

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11/45-0-1 2



| CUT JUMPERS | | |
|----------------------------|----------------------------|----------------------------|
| P5 7-8 | P5 3-4 | P6 7-8 |
| BIPOLAR ONLY | | |
| IF MORE THAN 2K OF BIPOLAR | IF MORE THAN 4K OF BIPOLAR | IF MORE THAN 6K OF BIPOLAR |
| BIPOLAR AND MOS. | | |
| NEVER CUT | ALWAYS CUT | IF MORE THAN 2K OF BIPOLAR |



| FIRST USED ON OPERATION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|--|----------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | | | | |
| DECIMALS | ANGLES | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | |
| 1/16 | 30° | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y | | | | |
| MATERIAL | NEXT HIGHER ASSY. | 11/45 POWER SYSTEM (UPPER H742) | | |
| FINISH | SCALE NONE | DIC 11/45-0-1 | NUMBER | REV. E |
| | SHEET 2 OF 5 | DIST. | | |

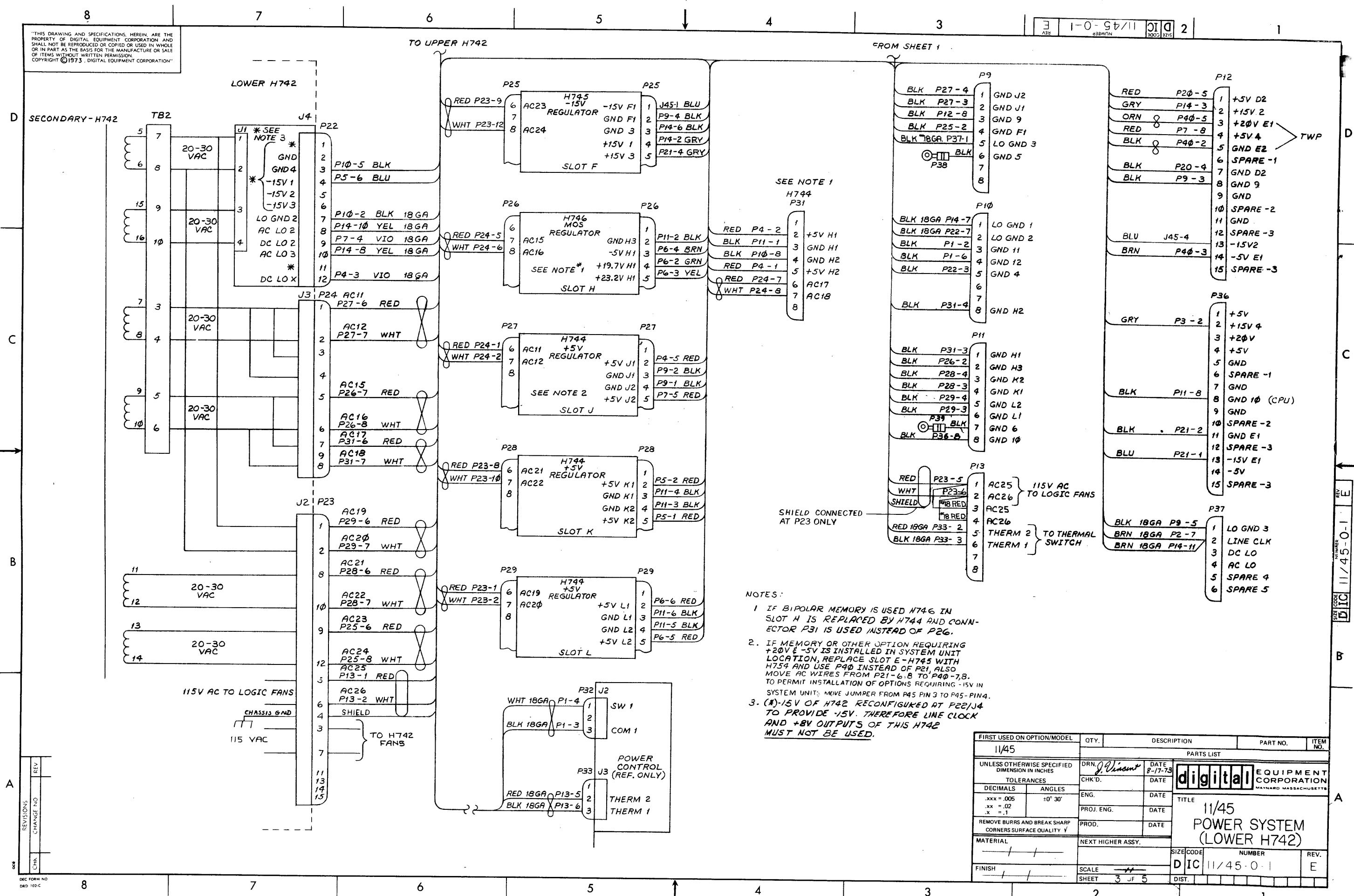
| REV. | CHANGE NO. | CHK. |
|------|------------|------|
| | | |

DEC FORM NO. 100-8

REV. E 11/45-0-1

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11/45-0-1 2



SEE NOTE 1
H744
P31

| | |
|---|-----------|
| 1 | RED P4-2 |
| 2 | BLK P11-1 |
| 3 | BLK P10-8 |
| 4 | RED P4-1 |
| 5 | RED P24-7 |
| 6 | WHT P24-8 |
| 7 | AC17 |
| 8 | AC18 |

- NOTES:
- IF BIPOLAR MEMORY IS USED H746 IN SLOT H IS REPLACED BY H744 AND CONNECTOR P31 IS USED INSTEAD OF P26.
 - IF MEMORY OR OTHER OPTION REQUIRING +20V & -5V IS INSTALLED IN SYSTEM UNIT LOCATION, REPLACE SLOT E-H745 WITH H754 AND USE P40 INSTEAD OF P21. ALSO MOVE AC WIRES FROM P21-6, 8 TO P40-7, 8. TO PERMIT INSTALLATION OF OPTIONS REQUIRING -15V IN SYSTEM UNIT; MOVE JUMPER FROM P45 PIN 3 TO P45-PIN 4.
 - (*)-15V OF H742 RECONFIGURED AT P22/J4 TO PROVIDE -15V. THEREFORE LINE CLOCK AND +8V OUTPUTS OF THIS H742 MUST NOT BE USED.

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|-----------|-----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | | | | |
| TOLERANCES | | | | |
| DECIMALS | ANGLES | ENG. | DATE | |
| .xxx = .005 | ±0° 30' | PROJ. ENG. | DATE | |
| .xx = .02 | | PROD. | DATE | |
| .x = .1 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY √ | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | SCALE | | |
| | | SHEET 3 OF 5 | | |
| TITLE | | | SIZE CODE | NUMBER |
| 11/45 POWER SYSTEM (LOWER H742) | | | DIC | 11/45-0-1 |
| | | | DIST. | REV. E |

| | |
|------------|--|
| REV. | |
| CHANGE NO. | |
| CHG. | |
| REV. | |

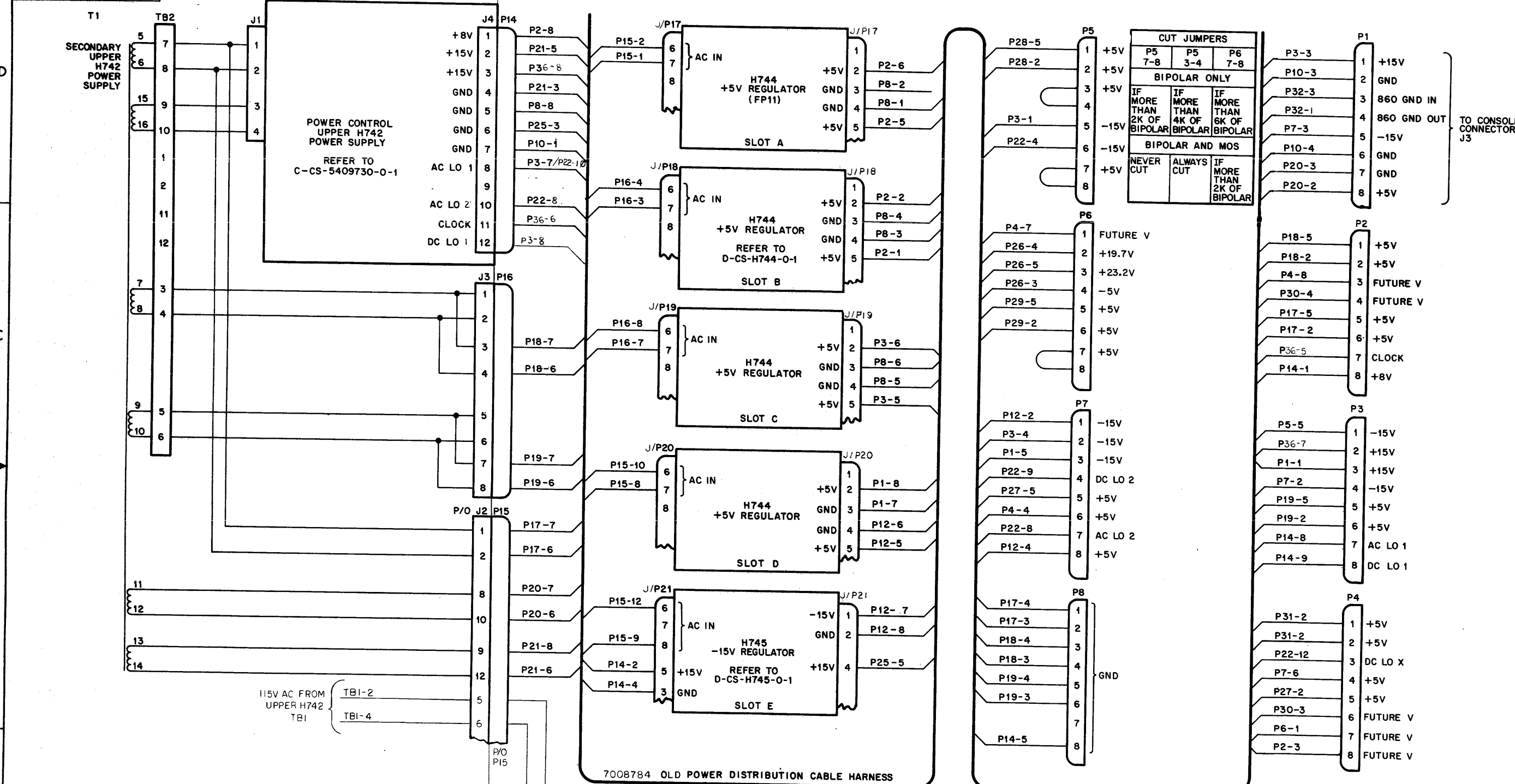
DEC FORM NO. 102-C

DRAWING NO. 11/45-0-1

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UPPER H742 POWER SUPPLY

11/45-0-1
3003 3215

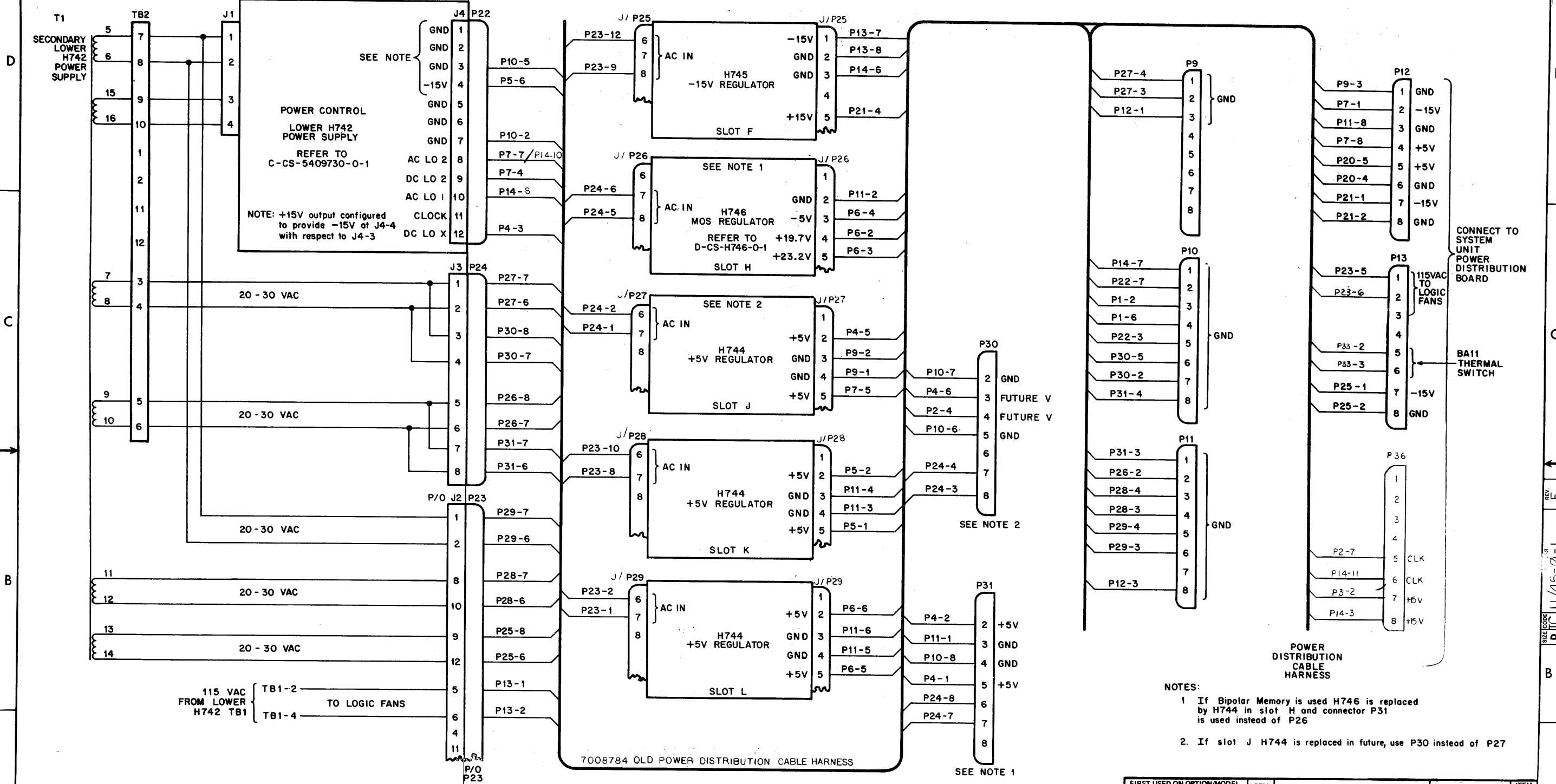


| | |
|------------|--|
| REV. | |
| CHANGE NO. | |
| CHK | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------|---------------------------------|----------|
| 11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DATE | digital EQUIPMENT CORPORATION | |
| DECIMALS | ANGLES | DATE | MAYNARD MASSACHUSETTS | |
| .XXX = .005 | ±0° 30' | DATE | TITLE | |
| .XX = .02 | | DATE | OLD POWER SYSTEMS CONFIGURATION | |
| .X = .1 | | DATE | REV. | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | DATE | E | |
| MATERIAL | NEXT HIGHER ASSY. | DATE | SIZE CODE | |
| FINISH | B-DD-11/45-0 | DATE | NUMBER | |
| | SCALE | DATE | REV. | |
| | SHEET 4 OF 5 | DATE | D IC 11/45-0-1 | |
| | DIST. | DATE | SHEET | |

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LOWER H742 POWER SUPPLY



| | |
|------------|--|
| REV. | |
| CHANGE NO. | |
| CHK | |

DEC FORM NO. DRD 100-A

THIS SHEET APPLIES TO MACHINES WITH SERIAL NUMBERS LESS THAN 2000

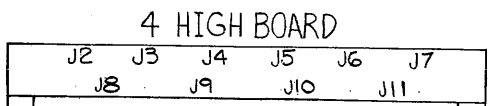
| | | | | |
|--|--|-------------|--|----------|
| FIRST USED ON OPTION/MODEL 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | CHK'D | DATE | TITLE | |
| ANGLES | ENG. | DATE | OLD POWER SYSTEMS CONFIGURATION | |
| .XXX = .005 | PROJ. ENG. | DATE | MATERIAL | |
| .XX = .02 | MOD. | DATE | NEXT HIGHER ASSY. | |
| .X = .1 | REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | DATE | SCALE | |
| | | | FINISH | |
| | | | SHEET 5 OF 5 | |
| | | | DIST. | |
| | | | SIZE CODE NUMBER REV. | |
| | | | D I C 11/45-0-1 E | |

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| VOLTAGE | REGULATOR LOCATION | PIN | ROW | SLOT | MATE N LOCK CONNECTION | WIRE WRAP PIN |
|---------|--------------------|--------|-------|-------------|------------------------|---------------|
| +5V | A | A2, VI | A-F | 2-5 | J2-5,6 | |
| | B | A2 | | 1,6-9 | J2-3,4 | |
| | B | VI | | 6-9 | J2-3,4 | |
| | C | A2, VI | | 10-15 | J3-5,6 | |
| | J1 | | | 16-18 | J4-6,7 | |
| | H2 | | | 19,20 | J4-1,2, J5-8 | |
| | K | | | 21-23 | J5-1,2,3 | |
| | L | A2, VI | A-F | 24,25 | J6-5,6,7 | |
| | J | A2 | A | 16 | J5-4,7, J6-8 | |
| | D | | A,B | 26 | J7-8 | |
| | D | | C-F | 26-28 | J7-8 | |
| +5V | J1 | A2 | A,B | 27,28 | J7-5,6 | |
| +8V | TOP H742 | B1 | F | 1 | J2-8 | SP-1 |
| LTCL | TOP H742 | R1 | C | 1 | J2-7 | |
| FV1 | J2 | | | | J2-1,2 | SP-2 |
| DCLO1 | TOP H742 | U1 | C | 12 | J3-8 | |
| ACLO1 | TOP H742 | S1 | C | 12 | J3-7 | |
| -15V | E | B2 | E | 2 | J3-4 | SP-3 |
| +15V | TOP H742 | A1 | E | 15 | J3-2,3 | SP-4 |
| -15V | BOT. H742 | B2 | E | 16 | J3-1 | SP-5 |
| FV1 | J2 | | | | J4-8 | SP-6 |
| FV2 | J2 | | | | J4-4,5, J6-3 | SP7, SP10 |
| DCLOX | BOT. H742 | U2 | B | 16 | J4-3 | |
| -15V | BOT. H742 | B2 | E | 21 | J5-5,6 | SP-8 |
| -5V | H1 | C1 | F | 17-20,22-25 | J6-4 | SP-9 |
| +23V | H1 | V2 | A,C,E | 17-20,22-25 | J6-2 | |
| +19V | H1 | U2 | A,C,E | 17-20,22-25 | J6-1 | |
| ACLO2 | BOT. H742 | F1 | B | 28 | J7-7 | |
| DCLO2 | BOT. H742 | F2 | B | 28 | J7-4 | |

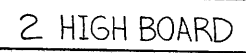
| | PIN | ROW | SLOT | MATE N LOCK CONNECTION |
|--------|----------------|-----|---------|------------------------|
| GROUND | C2, N2, T1 | A-F | 2-25 | J8-1,8 |
| | C2, T1 | A-F | 1,26-28 | J9-1,8 |
| | B2, V2 | A,B | | J10-1,8 |
| | N1, P1, R1, S1 | A | | J11-1,8 |
| | D1, E1 | B | 1,26-28 | |

NOTES:
 1. THIS LISTING IS FURNISHED TO SHOW COMBINATIONS OF MATE N LOCK CONNECTORS (J#) AND WIREWRAP PINS THAT ARE TO BE ETCHED TOGETHER. VOLTAGES WILL BE WIREWRAPPED BETWEEN 5409910 AND 5409912
 2. ALL MATE N LOCK CONNECTORS AND PINS LISTED ARE CONNECTED TOGETHER BY THE GROUND PLANE (5409910-4 HIGH BOARD). WIREWRAP CONNECTIONS WILL BE MADE BETWEEN DXXT1 (5409910) AND EXXC2 (5409912)-XX= SLOT NUMBERS 01-28



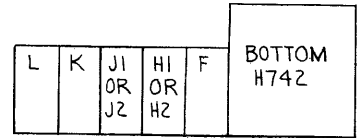
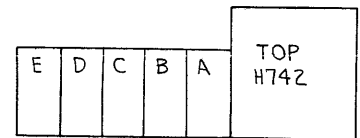
ROW A
ROW B
ROW C
ROW D

5409910
(POWER PLANE)

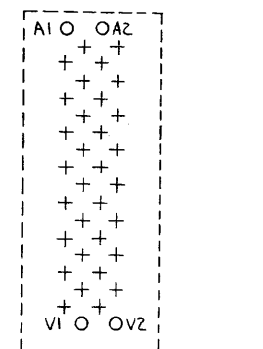


ROW E
ROW F

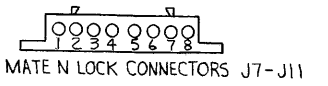
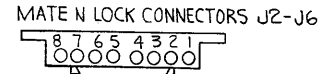
5409912
(POWER PLANE)



REGULATOR LOCATIONS



PIN CONFIGURATION
(ONE ROW-ONE SLOT SECTION)



| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------------|--------------|--|
| PDP11/45 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | DRN 5/26/72 | DATE 4/26/72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS |
| DECIMALS | ANGLES | CHK'D J. Coe | DATE 4/28/72 | |
| XXX = .005 | ±0° 30' | ENG. J. Coe | DATE 4/28/72 | |
| .XX = .02 | | PROJ. ENG. J. Coe | DATE 4/28/72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. J. Coe | DATE 5-1-72 | TITLE 11/45 BACK PANEL PC BOARD |
| MATERIAL | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| FINISH | | | B-DD-11/45-0 | DIC 11/45-0-2 |
| | SCALE | | SHEET 1 OF 1 | REV. |

| REV. | CHG. | NO. |
|------|------|-----|
| | | |
| | | |

REV. A NUMBER 7009540-0-2 SIZE CODE K WL 2

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DIGITAL EQUIPMENT CORPORATION

| FIRST USED ON OPTION MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|------------------------------|--------------|---|-------------|----------|
| 11/45 | | PARTS LIST | | |
| DRN. <i>B. B. Bogert</i> | DATE 10-5-73 | digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small> TITLE <h1 style="margin: 0;">WIRE LIST</h1> | | |
| CHK'D. <i>M. Walsh</i> | DATE 11/5/73 | | | |
| ENG. <i>David Boon</i> | DATE 11/5/73 | | | |
| PROJ. ENG. <i>David Boon</i> | DATE 11/5/73 | | | |
| PROD. <i>Jack Herman</i> | DATE 11-5-73 | | | |
| NEXT HIGHER ASSEMBLY | | | | |
| J-IA-7009540-0-0 | | SIZE CODE | NUMBER | REV. |
| SCALE | — / — / — | K WL | 7009540-0-2 | A |
| SHEET | 1 OF — | DIST. | | |

| REVISIONS | CHANGE NO. | REV. |
|--------------------------|-------------|------|
| 28 | 11/45-00057 | A |
| <i>R. Nowles 3-21-74</i> | | |
| V. BOAEN | | |
| <i>David Boon</i> | | |

| RUN NAME | A/P | PIN LOCATION | BAY ORDER | Q | DRAW | RV | RG | Y | X | Z LEVEL | REMARKS | NEW RUN INDICATOR | RUN NUM |
|------------------------|-----|-----------------------|-----------|---|------|----|----|-----|---|---------|---|-------------------|----------|
| SEE NOTE: SEE NOTE: | | NOTE NOTE | | | | | | | | | ALL WIRES #14 AWG UNLESS OTHERWISE NOTED | X | 1 1 |
| +15V1 +15V1 | | P14-2 P25-4 42.25" | | | | | | GRY | | | | X | 2 2 |
| +15V2 +15V2 | | P12-2 P14-3 56.5" | | | | | | GRY | | | | X | 3 3 |
| +15V3 +15V3 | | P21-4 P25-5 51" | | | | | | GRY | | | | X | 4 4 |
| +15V4 +15V4 | | P3-2 P36-2 31.5" | | | | | | GRY | | | | X | 5 5 |
| +15V5 +15V5 | | P1-1 P3-3 18" | | | | | | GRY | | | | X | 6 6 |
| +19.7VH1 +19.7VH1 | | P26-4 P6-2 72" | | | | | | GRN | | | | X | 7 7 |
| +20VE1 +20VE1 | | P12-3 P40-5 62.5" | | | | | | | | | URN-BLK TWP(GND E2) | X | 8 8 |
| +23.2VH1 +23.2VH1 | | P26-5 P6-3 72" | | | | | | YEL | | | | X | 9 9 |
| +5J1 +5J1 | | P27-2 P4-5 80" | | | | | | RED | | | | X | 10 10 |
| +5V1 +5V1 | | P5-3 P5-4 2.25" | | | | | | RED | | | | X | 11 11 |
| +5V2 +5V2 | | P5-7 P5-8 2.25" | | | | | | RED | | | | X | 12 12 |
| +5V3 +5V3 | | P6-7 P6-8 2.25" | | | | | | RED | | | | X | 13 13 |
| +5V4 +5V4 | | P12-4 P7-8 20.5" | | | | | | RED | | | | X | 14 14 |
| +5V5 +5V5 | | P4-4 P7-6 17" | | | | | | RED | | | | X | 15 15 |
| +5VA1 +5VA1 | | P17-2 P2-6 65" | | | | | | RED | | | | X | 16 16 |
| +5VA2 +5VA2 | | P17-5 P2-5 65.5" | | | | | | RED | | | | X | 17 17 |
| +5VB2 +5VB2 | | P18-5 P2-1 69" | | | | | | RED | | | | X | 18 18 |

| RUN NAME | A/P | PIN LOCATION | BAY ORDER | Q | DRAW | RV | RG | Y | X | Z LEVEL | REMARKS | NEW RUN INDICATOR | RUN NUM |
|-------------------------|-----|----------------------------------|-----------|---|------|----|----|------------|---|------------------|---------|-------------------|----------------|
| +5VC1 +5VC1 | | P19-2 P3-6 71" | | | | | | RED | | | | X | 19 19 |
| +5VC2 +5VC2 | | P19-5 P3-5 71" | | | | | | RED | | | | X | 20 20 |
| +5VD1 +5VD1 | | P1-8 P20-2 82" | | | | | | RED | | | | X | 21 21 |
| +5VD2 +5VD2 | | P12-1 P20-5 59.5" | | | | | | RED | | | | X | 22 22 |
| +5VE1 +5VE1 | | P18-2 P2-2 69" | | | | | | RED | | | | X | 23 23 |
| +5VH1 +5VH1 | | P31-2 P4-2 77" | | | | | | RED | | | | X | 24 24 |
| +5VH2 +5VH2 | | P31-5 P4-1 77" | | | | | | RED | | | | X | 25 25 |
| +5VJ2 +5VJ2 | | P27-5 P7-5 72.5" | | | | | | RED | | | | X | 26 26 |
| +5VK1 +5VK1 | | P28-2 P5-2 81.25" | | | | | | RED | | | | X | 27 27 |
| +5VK2 +5VK2 | | P28-5 P5-1 81" | | | | | | RED | | | | X | 28 28 |
| +5VL1 +5VL1 | | P29-2 P6-6 81" | | | | | | RED | | | | X | 29 29 |
| +5VL2 +5VL2 | | P29-5 P6-5 81" | | | | | | RED | | | | X | 30 30 |
| +8V +8V | | P14-1 P2-8 71" | | | | | | WHT | | | | X | 31 31 |
| -15V1 -15V1 | | P22-4 P5-6 76.5" | | | | | | BLU | | | | X | 32 32 |
| -15V2 -15V2 | | J45-4 P12-13 21" | | | | | | BLU | | | | X | 33 33 |
| -15V3 -15V3 -15V3 | | P07-1 P45-1 P45-3 4" 2" | | | | | | BLU BLU | | #18AWG #18AWG | | X | 34 34 34 |
| -15V4 -15V4 | | P1-5 P7-3 27.75" | | | | | | BLU | | | | X | 35 35 |
| -15V5 -15V5 | | P3-1 P5-5 14.5" | | | | | | BLU | | | | X | 36 36 |

| RUN NAME | A/P | PIN LOCATION | BAY ORDER | Q | DRAW | RV | RG | Y | X | Z LEVEL | REMARKS | NEW RUN INDICATOR | RUN NUM |
|----------|-----|--------------|-----------|---|------|----|----|---|---|---------|---------|-------------------|---------|
| -15V6 | | P3-4 | | | | | | | | | | | |
| -15V6 | | P7-2 19.5" | | | | | | | | | | X | 37 |
| -15VE1 | | P21-1 | | | | | | | | | | | 37 |
| -15VE1 | | P36-13 64" | | | | | | | | | | X | 38 |
| -15VF1 | | J45-1 | | | | | | | | | | | 38 |
| -15VF1 | | P25-1 65" | | | | | | | | | | X | 39 |
| -5VE1 | | P12-14 | | | | | | | | | | | 39 |
| -5VE1 | | P40-3 62.75" | | | | | | | | | | X | 40 |
| -5VH1 | | P26-3 72.5" | | | | | | | | | | | 40 |
| -5VH1 | | P6-4 | | | | | | | | | | X | 41 |
| AC L01 | | P14-8 70.5 | | | | | | | | | | | 41 |
| AC L01 | | P3-7 | | | | | | | | | | X | 42 |
| AC L01' | | P14-8 | | | | | | | | | | | 42 |
| AC L01' | | P22-10 47" | | | | | | | | | | X | 43 |
| AC L02 | | P14-10 | | | | | | | | | | | 43 |
| AC L02 | | P7-7 60.25" | | | | | | | | | | X | 44 |
| AC L02' | | P14-10 | | | | | | | | | | | 44 |
| AC L02' | | P22-8 46" | | | | | | | | | | X | 45 |
| AC01 | | P16-3 | | | | | | | | | | | 45 |
| AC01 | | P18-6 12" | | | | | | | | | | X | 46 |
| AC02 | | P16-4 | | | | | | | | | | | 46 |
| AC02 | | P18-7 12" | | | | | | | | | | X | 47 |
| AC03 | | P16-7 | | | | | | | | | | | 47 |
| AC03 | | P19-6 15.75" | | | | | | | | | | X | 48 |
| AC04 | | P16-8 | | | | | | | | | | | 48 |
| AC04 | | P19-7 15.75" | | | | | | | | | | X | 49 |
| AC05 | | P15-1 | | | | | | | | | | | 49 |
| AC05 | | P17-6 11.5" | | | | | | | | | | X | 50 |
| AC06 | | P15-2 | | | | | | | | | | | 50 |
| AC06 | | P17-7 11.5" | | | | | | | | | | X | 51 |
| AC07 | | P15-8 | | | | | | | | | | | 51 |
| AC07 | | P20-6 16" | | | | | | | | | | X | 52 |
| AC08 | | P15-10 | | | | | | | | | | | 52 |
| AC08 | | P20-7 16" | | | | | | | | | | X | 53 |
| AC09 | | P15-9 | | | | | | | | | | | 53 |
| AC09 | | P21-6 21.5" | | | | | | | | | | X | 54 |

| RUN NAME | A/P | PIN LOCATION | BAY ORDER | Q | DRAW | RV | RG | Y | X | Z LEVEL | REMARKS | NEW RUN INDICATOR | RUN NUM |
|----------|-----|--------------|-----------|---|------|----|----|---|---|---------|---------|-------------------|---------|
| AC10 | | P15-12 | | | | | | | | | | | |
| AC10 | | P21-8 21.5" | | | | | | | | | | X | 55 |
| AC11 | | P24-1 | | | | | | | | | | | 55 |
| AC11 | | P27-6 21" | | | | | | | | | | X | 56 |
| AC12 | | P24-2 | | | | | | | | | | | 56 |
| AC12 | | P27-7 21" | | | | | | | | | | X | 57 |
| AC15 | | P24-5 | | | | | | | | | | | 57 |
| AC15 | | P26-7 18" | | | | | | | | | | X | 58 |
| AC16 | | P24-6 | | | | | | | | | | | 58 |
| AC16 | | P26-8 18" | | | | | | | | | | X | 59 |
| AC17 | | P24-7 | | | | | | | | | | | 59 |
| AC17 | | P31-6 17.5" | | | | | | | | | | X | 60 |
| AC18 | | P24-8 | | | | | | | | | | | 60 |
| AC18 | | P31-7 17.5" | | | | | | | | | | X | 61 |
| AC19 | | P23-1 | | | | | | | | | | | 61 |
| AC19 | | P29-6 21" | | | | | | | | | | X | 62 |
| AC20 | | P23-2 | | | | | | | | | | | 62 |
| AC20 | | P29-7 21" | | | | | | | | | | X | 63 |
| AC21 | | P23-8 | | | | | | | | | | | 63 |
| AC21 | | P28-6 17.5" | | | | | | | | | | X | 64 |
| AC22 | | P23-10 | | | | | | | | | | | 64 |
| AC22 | | P28-7 17.5" | | | | | | | | | | X | 65 |
| AC23 | | P23-9 | | | | | | | | | | | 65 |
| AC23 | | P25-6 9.5" | | | | | | | | | | X | 66 |
| AC24 | | P23-12 | | | | | | | | | | | 66 |
| AC24 | | P25-8 9.5" | | | | | | | | | | X | 67 |
| AC25 | | P13-1 | | | | | | | | | | | 67 |
| AC25 | | P13-3 2.75" | | | | | | | | | | X | 68 |
| AC25' | | P13-1 | | | | | | | | | | | 68 |
| AC25' | | P23-5 64.5" | | | | | | | | | | X | 69 |
| AC26 | | P13-2 | | | | | | | | | | | 69 |
| AC26 | | P23-6 64.5" | | | | | | | | | | X | 70 |
| AC26' | | P13-2 | | | | | | | | | | | 70 |
| AC26' | | P13-4 2.75" | | | | | | | | | | X | 71 |
| AC27 | | P15-5 | | | | | | | | | | | 71 |
| AC27 | | P34 57" | | | | | | | | | | X | 72 |

DRAWING DIRECTORY

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CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

| SEQUENCE | |
|----------|------------------|
| | B-DD-861-0 |
| | E-UA-861-0-0 |
| | D-CS-5410206-0-1 |
| | D-CS-861-A-1 |
| | D-CS-861-B-1 |
| | D-CS-861-C-1 |
| | A-PI-3700083-0-0 |

DRAWING DIRECTORY
POWER CONTROL, 861
PILOT CONTROL
CIRCUIT SCHEMATIC 861
CIRCUIT SCHEMATIC 861
CIRCUIT SCHEMATIC 861
PACKAGING INSTRUCTION

| UNIT VARIATIONS | | PRINT SET | | |
|-----------------|--------------------|-----------|--|--|
| VAR | TITLE | | | |
| 861 | POWER CONTROL, 861 | | | |
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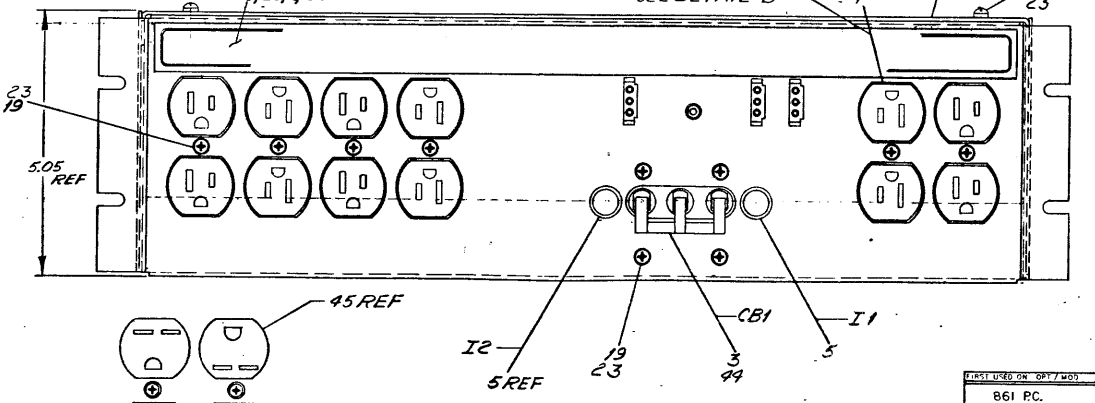
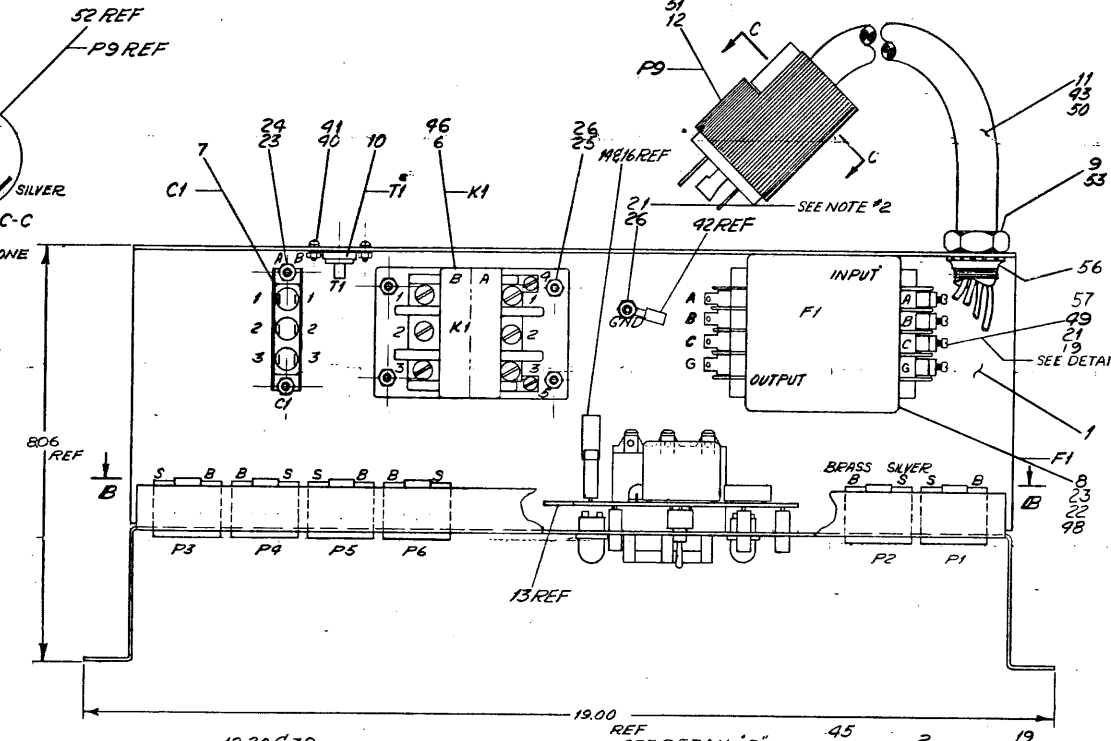
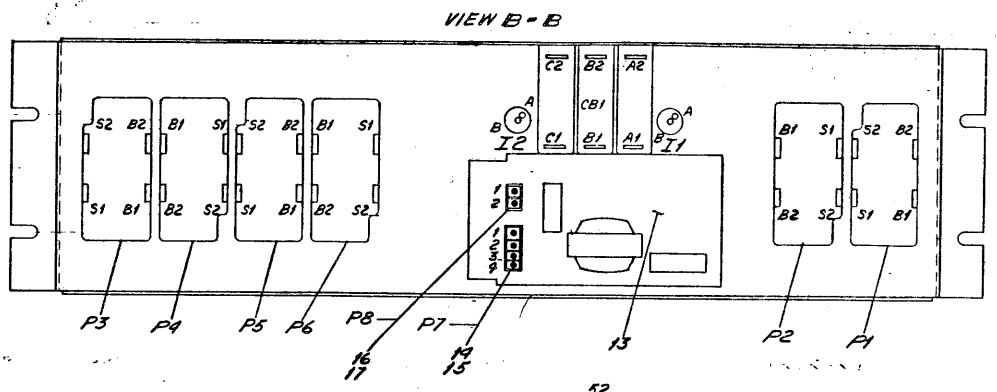
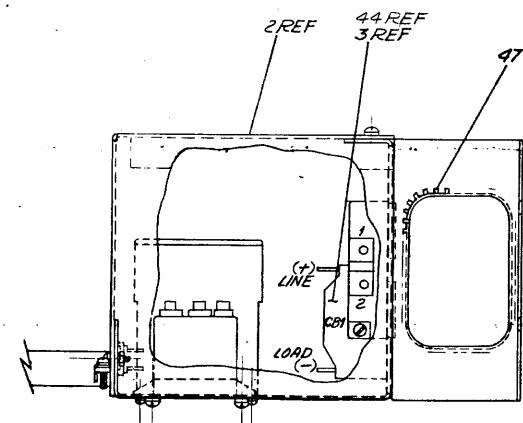
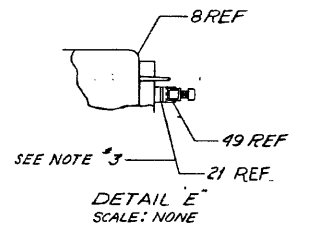
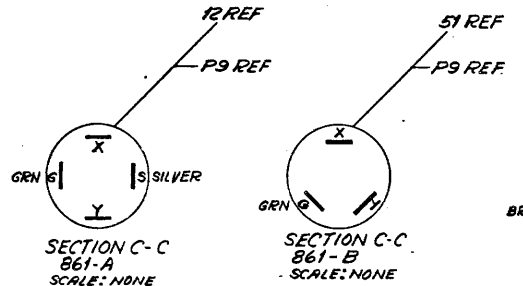
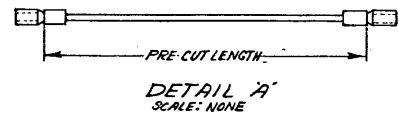
REVISIONS

| DATE | CHG. NO. | REV |
|------|----------|-----|
| 2/73 | 861-3 | A |
| 8/74 | 861-4 | B |

| | | | | | |
|----------------------|--------------------------|--------------|-------------------|---------|--------------|
| USED ON OPTION/MODEL | DRN. SCHMIDT | DATE 9/13/72 | TITLE | | |
| | CHK'D. B. ALLEN | DATE 9/13/72 | 861 POWER CONTROL | | |
| | PROJ ENG. JIM KALAGHER | DATE 9/13/72 | | | |
| | PROD. Fazio Paul | DATE 9/25/72 | SIZE B | CODE DD | NUMBER 861-0 |
| | FIELD SERV. Paton Irving | DATE 9/25/72 | DIST | | REV B |
| SHEET 1 OF 3 | | | | | |

DEC 16-13251-1062-1A-R073

| DWG. NO. | VARIATION | |
|----------|----------------|---------|
| | VAC OUT PHASES | AMP OUT |
| B61-A | 120 | 32 |
| B61-B | 240 | 16 |
| B61-C | 120 | 24 |



- NOTES:
- FOR WIRE TABLES, SEE SHEET #2
 - LOCKWASHER (ITEM 21) MUST BE PLACED UNDER SOLDERLESS CONN (ITEM 42)
 - LOCKWASHER (ITEM 19) MUST BE PLACED BETWEEN FILTER (ITEM 8) AND TERM CLAMP (ITEM 49)

| QTY. | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|------|------|-------------------------------|-------------|----------|
| 3 | - | CLAMP TERMINAL | 121123-01 | 57 |
| 1 | 1 | LOCKNUT | 9009309 | 56 |
| 18 | - | CONN, SOLDERLESS (BLU) | 9008283 | 53 |
| 1/8 | - | WIRE, #18 AWG 2PKC (WHT) | 9107390-99 | 59 |
| - | 1 | STRAIN RELIEF (BLU) | 1211198-00 | 53 |
| 1 | - | MALE PLUG, 125V 30A | 1211193 | 52 |
| - | 1 | MALE PLUG, 250V 20A | 1211192 | 51 |
| 1 | - | POWER CORD 15 FT 12/3 | 1700025 | 50 |
| 3 | 4 | CLAMP TERMINAL | 121123-00 | 49 |
| 1 | - | FILTER 2 POLE 3 WIRE | 1211199 | 48 |
| 1/8 | 1/8 | SCREW, PAN HD #4-40 X 1/16 | 9007035 | 47 |
| - | 1 | CONTACTOR, 230 V | 1211197-1 | 46 |
| - | 6 | RECEPTACLE 15A 250VAC | 1211204 | 45 |
| 1 | - | CIRCUIT BREAKER 20-20 30 | 1211196 | 44 |
| 1/8 | - | POWER CORD 15 FT 12/3 | 1700027 | 43 |
| 1 | 1 | CONN, SOLDERLESS | 9007928 | 42 |
| 2 | 2 | NUT, KEP #4-40 | 9006557 | 41 |
| 2 | 2 | SCREW, PH PAN HD #4-40 X 1/16 | 9008301-1 | 40 |
| 1 | - | NAME PLATE, B61-C | 1211197-1 | 39 |
| 4 | 4 | CONN, SOLDERLESS DUAL 3000V | 9007925 | 38 |
| 27 | 27 | CONN, SOLDERLESS (BLU) | 9007919 | 37 |
| 7 | 6 | CONN, SOLDERLESS (RED) | 9007917 | 36 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (GRN) | 9107360-33 | 35 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (RED) | 9107360-11 | 34 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (BLU) | 9107360-00 | 33 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (WHT) | 9107360-99 | 32 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (RED) | 9107360-22 | 31 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (GRN) | 9107370-55 | 30 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (BLU) | 9107370-00 | 29 |
| - | 1/8 | WIRE, #18 AWG 2PKC (WHT) | 9107370-99 | 28 |
| 1/8 | 1/8 | WIRE, #18 AWG 2PKC (RED) | 9107370-22 | 27 |
| 4 | 5 | NUT, KEP #6-32 | 9006563 | 26 |
| 4 | 4 | SCREW, PH PAN HD #6-32 X 1/16 | 9006037-1 | 25 |
| 2 | 2 | NUT, KEP #6-32 | 9006560 | 24 |
| 18 | 18 | SCREW, PH PAN HD #6-32 X 1/16 | 9006021-1 | 23 |
| 2 | 2 | LOCKWASHER, #6 EXT TOOTH | 9007693 | 22 |
| 4 | 1 | LOCKWASHER, #6 INT TOOTH | 9006634 | 21 |
| - | 1 | NAME PLATE, B61-B | 1211197-0 | 20 |
| 14 | 17 | LOCKWASHER, #6 INT TOOTH | 9006633 | 19 |
| - | 1 | NAME PLATE, B61-A | 1211197-0 | 18 |
| 2 | 2 | PIN, MALE | 1209378-01 | 17 |
| 1 | 1 | INSULING 2 PIN MALE | 121882-2 | 16 |
| 3 | 3 | PIN, FEMALE | 1209379-01 | 15 |
| 1 | 1 | INSULING 3 PIN FEMALE | 121882-1 | 14 |
| 1 | 1 | PC BOARD ASSY | 9107390-0-1 | 13 |
| - | 1 | MALE PLUG, 125/250V 20A | 1211193 | 12 |
| - | 1/8 | POWER CORD 15 FT 12/3 | 1700026 | 11 |
| 1 | 1 | THERMOSTAT | 1211198 | 10 |
| 1 | 1 | STRAIN RELIEF (GRN) | 1211198-01 | 9 |
| - | 1 | FILTER 3 POLE 4 WIRE | 1211197 | 8 |
| 1 | 1 | CAPACITOR | 1000034 | 7 |
| 1 | 1 | CONTACTOR 115 V | 1211197-0 | 6 |
| 2 | 2 | LAMP POWER 115 V | 1205303 | 5 |
| 6 | 6 | RECEPTACLE 15A 115 VAC | 1205351 | 4 |
| - | 1 | CIRCUIT BREAKER, 20A 3-PHASE | 1211192 | 3 |
| 1 | 1 | COVER, B61 PC | 9107390-0-0 | 2 |
| 1 | 1 | CHASSIS, B61 PC | 9107390-0-0 | 1 |

861 P.C.

| | | |
|------------------------------|------|-------------|
| UNLESS OTHERWISE SPECIFIED | DATE | EQUIPMENT |
| TOLERANCES | DATE | CORPORATION |
| DECIMALS | DATE | |
| ANGLES | DATE | |
| XXX - .000 | DATE | |
| XX - .005 | DATE | |
| X - .015 | DATE | |
| REMOVE BURRS AND BREAK SHARP | DATE | |
| CORNERS SURFACE QUALITY | DATE | |
| MATERIAL | DATE | |
| NEXT HIGHER ASSY | DATE | |
| SEE PARTS LIST | DATE | |
| FINISH | DATE | |
| SCALE | DATE | |
| SHEET | DATE | |

861 P.C. POWER CONTROL, 861

REV. E JA 861-0-0

Reference to drawings and specifications, here, are by reference to the drawings and specifications of the equipment to which these tables apply.

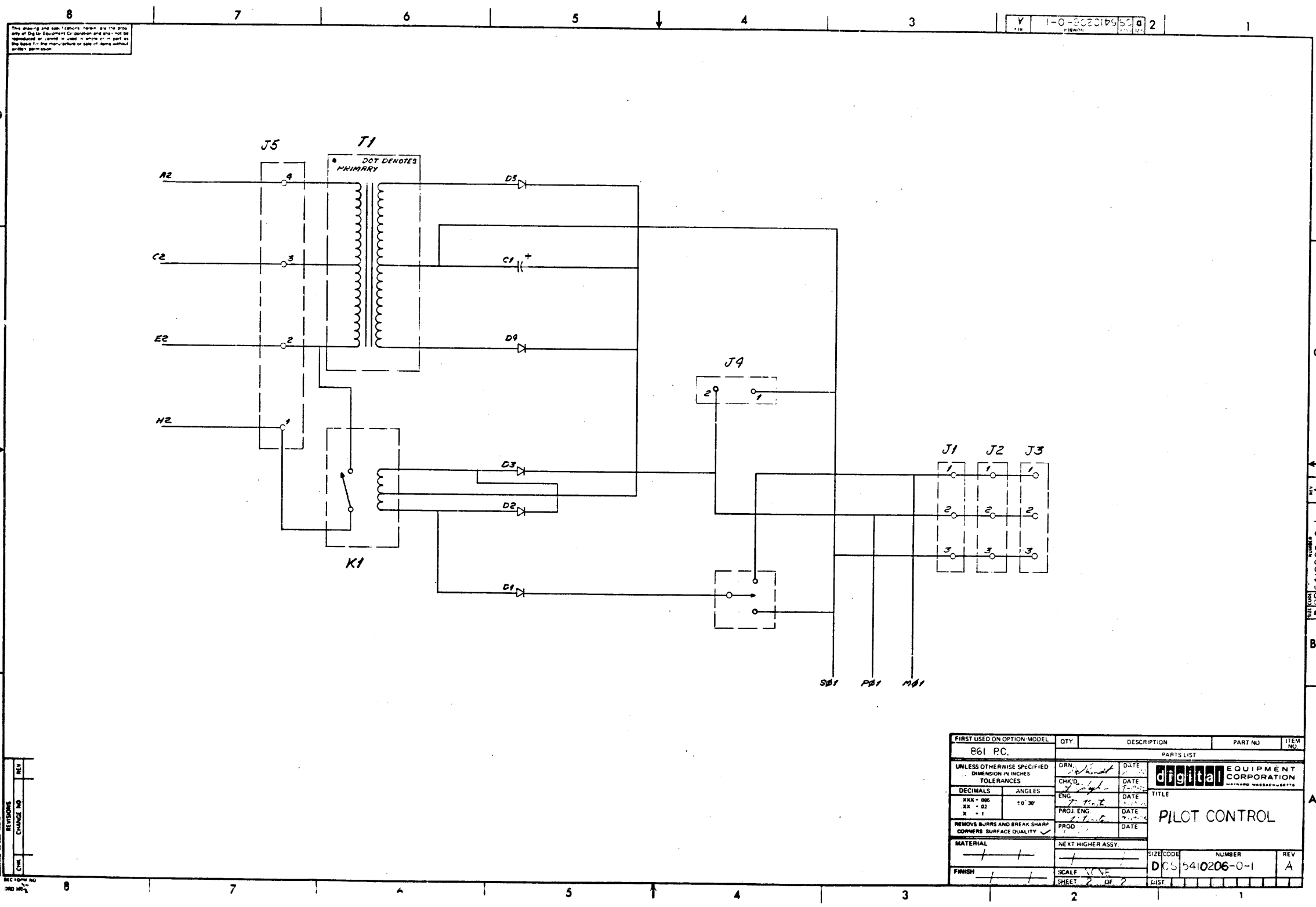
| ITEM NO | DESCRIPTION | FROM POINT | TO POINT | WITH | CONN | REMARKS |
|---------|-------------|------------|----------|------|-------|----------------|
| 29 | BLK 14 | FL-B2 | KI-A3 | 37 | --- | SEE DETAIL 'A' |
| 33 | BLK 18 | PL-B1 | KI-A5 | 36 | --- | 12.0 |
| 28 | WHT 14 | PL-S1 | KI-A1 | 37 | --- | 9.0 |
| 28 | WHT 14 | PL-S2 | KI-A2 | 37 | --- | 12.0 |
| 32 | WHT 18 | PL-S2 | PI-2 | 36 | --- | 15.0 |
| 31 | RED 18 | PL-S2 | PI-3 | 36 | --- | 15.0 |
| 27 | RED 14 | PL-B1 | KI-A1 | 37 | --- | 12.0 |
| 28 | WHT 14 | PL-S1 | CF-A3 | 37 | --- | 6.0 |
| 28 | WHT 14 | PL-S2 | CF-A3 | 37 | --- | 6.0 |
| 27 | RED 14 | PL-S1 | CF-A1 | 37 | --- | 6.0 |
| 27 | RED 14 | PL-S2 | CF-B1 | 37 | --- | 9.0 |
| 28 | WHT 14 | PL-S1 | PL-S2 | 37 | --- | 4.0 |
| 28 | WHT 14 | PL-S1 | PL-S2 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-A2 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-A2 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-B1 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-B1 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-B3 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-B3 | 37 | --- | 6.0 |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 29 | BLK 14 | FL-C | OUT PUT | 37 | CB-A1 | LINE + 37 |
| 27 | RED 14 | FL-A | OUT PUT | 37 | CB-B1 | LINE + 37 |
| 27 | RED 14 | KI-A1 | --- | 37 | CB-C1 | LINE + 37 |
| 28 | WHT 14 | KI-A2 | --- | 37 | CB-C2 | LOAD - 37 |
| 28 | WHT 14 | KI-A3 | --- | 37 | CB-B2 | LOAD - 37 |
| 29 | BLK 14 | KI-A3 | --- | 37 | CB-A2 | LOAD - 37 |
| 30 | GRN 14 | FL-G | OUTPUT | 37 | GND | 42 |
| 39 | BRN 18 | KI-A4 | --- | 36 | PL-1 | 15 |
| 35 | ORN 18 | PL-1 | --- | 17 | TI | 36 |
| 35 | ORN 18 | PL-2 | --- | 17 | TI | 36 |
| 11 | BLK 12 | P9-Y | --- | --- | --- | 10.0 |
| 11 | RED 12 | P9-X | --- | --- | --- | 10.0 |
| 11 | WHT 12 | P9-S | --- | --- | --- | 10.0 |
| 11 | GRN 12 | P9-G | --- | --- | --- | 10.0 |

| ITEM NO | DESCRIPTION | FROM POINT | TO POINT | WITH | CONN | REMARKS |
|---------|-------------|------------|----------|------|-------|----------------|
| 29 | BLK 14 | PL-B2 | KI-A3 | 37 | --- | SEE DETAIL 'A' |
| 29 | BLK 14 | PL-B1 | PL-B2 | 37 | --- | 12.0 |
| 28 | WHT 14 | PL-S1 | PL-S2 | 37 | --- | 6.0 |
| 28 | WHT 14 | PL-S1 | KI-A2 | 37 | --- | 4.0 |
| 32 | WHT 18 | PL-S2 | PI-2 | 37 | --- | 12.0 |
| 31 | RED 18 | PL-S2 | PI-3 | 36 | --- | 15.0 |
| 28 | WHT 14 | PL-S1 | PL-S2 | 37 | --- | 6.0 |
| 28 | WHT 14 | PL-S1 | CF-A3 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-A2 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-A2 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-B1 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-B1 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-B3 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-B3 | 37 | --- | 6.0 |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 29 | BLK 14 | FL-C | OUTPUT | 37 | CB-A1 | LINE + 37 |
| 28 | WHT 14 | FL-A | OUTPUT | 37 | CB-C1 | LINE + 37 |
| 28 | WHT 14 | KI-A1 | --- | 37 | CB-C2 | LOAD - 37 |
| 29 | BLK 14 | KI-A3 | --- | 37 | CB-A2 | LOAD - 37 |
| 30 | GRN 14 | FL-G | OUTPUT | 37 | GND | 42 |
| 39 | BRN 18 | KI-A4 | --- | 36 | PL-1 | 15 |
| 35 | ORN 18 | PL-1 | --- | 17 | TI | 36 |
| 35 | ORN 18 | PL-2 | --- | 17 | TI | 36 |
| 33 | BLK 18 | PL-B1 | --- | 36 | PI-4 | 15 |
| 33 | BLK 18 | KI-A5 | --- | 36 | --- | 10.0 |
| 93 | GRN 14 | P9-G | --- | --- | --- | 49 |
| 93 | BLK 14 | P9-Y | --- | --- | --- | 49 |
| 93 | WHT 14 | P9-X | --- | --- | --- | 49 |
| 29 | BLK 14 | FL-B2 | --- | 37 | FL-B2 | 37 |

| ITEM NO | DESCRIPTION | FROM POINT | TO POINT | WITH | CONN | REMARKS |
|---------|-------------|------------|----------|------|-------|----------------|
| 29 | BLK 14 | PL-B2 | KI-A3 | 37 | --- | SEE DETAIL 'A' |
| 29 | BLK 14 | PL-B1 | KI-A5 | 36 | --- | 12.0 |
| 33 | BLK 14 | PL-S1 | PL-S2 | 36 | --- | 12.0 |
| 54 | WHT 10 | PL-S1 | PI-2 | 55 | --- | 4.0 |
| 54 | WHT 10 | PL-S2 | KI-A2 | 55 | --- | 12.0 |
| 31 | RED 18 | PL-S2 | PI-3 | 36 | --- | 15.0 |
| 32 | WHT 18 | PL-S2 | PI-2 | 36 | --- | 15.0 |
| 31 | RED 18 | PL-S2 | KI-A1 | 36 | --- | 15.0 |
| 54 | WHT 10 | PL-S1 | PI-2 | 55 | --- | 4.0 |
| 54 | WHT 10 | PL-S2 | KI-A2 | 55 | --- | 12.0 |
| 27 | RED 14 | PL-S1 | CF-A1 | 37 | --- | 6.0 |
| 27 | RED 14 | PL-S2 | CF-A1 | 37 | --- | 6.0 |
| 54 | WHT 10 | PL-S1 | PI-2 | 55 | --- | 4.0 |
| 54 | WHT 10 | PL-S2 | KI-A2 | 55 | --- | 12.0 |
| 29 | BLK 14 | PL-S1 | CF-A2 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-A2 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-B1 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-B1 | 37 | --- | 6.0 |
| 29 | BLK 14 | PL-S1 | CF-B3 | 37 | --- | 4.0 |
| 29 | BLK 14 | PL-S2 | CF-B3 | 37 | --- | 6.0 |
| 27 | RED 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 5 | BLK 14 | TI-A | --- | --- | --- | --- |
| 5 | BLK 14 | TI-B | --- | --- | --- | --- |
| 29 | BLK 14 | FL-B | OUTPUT | 37 | CB-B1 | LINE + 37 |
| 54 | WHT 10 | FL-A | OUTPUT | 55 | CB-A1 | LINE + 55 |
| 27 | RED 14 | FL-B | OUTPUT | 37 | CB-C1 | LINE + 37 |
| 27 | RED 14 | KI-A1 | --- | 37 | CB-C2 | LOAD - 37 |
| 54 | WHT 10 | KI-A2 | --- | 55 | CB-A2 | LOAD - 55 |
| 29 | BLK 14 | KI-A3 | --- | 37 | CB-B2 | LOAD - 37 |
| 30 | GRN 14 | FL-G | OUTPUT | 37 | GND | 42 |
| 35 | ORN 12 | PL-1 | --- | 17 | TI | 36 |
| 35 | ORN 18 | PL-2 | --- | 17 | TI | 36 |
| 39 | BRN 18 | KI-A4 | --- | 36 | PL-1 | 15 |
| 30 | GRN 14 | P9-G | --- | --- | --- | 49 |
| 50 | BLK 12 | P9-B | --- | --- | --- | 49 |
| 50 | WHT 12 | P9-S | --- | --- | --- | 49 |

| | | | |
|--|-----|-------------|------------|
| FIRST USED ON OPTION MODEL 861 PC | QTY | DESCRIPTION | PARTS LIST |
| <p>UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES</p> | | | |
| <p>DECIMALS ANGLES</p> | | | |
| <p>FINISH REMOVE BURRS AND BREAK SHARP EDGES TO PREVENT SURFACE DAMAGE</p> | | | |
| <p>MATERIAL</p> | | | |
| <p>DATE</p> | | | |
| <p>SCALE</p> | | | |
| <p>SHEET 2 OF 2</p> | | | |

CORNING EQUIPMENT CORPORATION
POWER CONTROL, 861
REV. B



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1-0-802019502 2

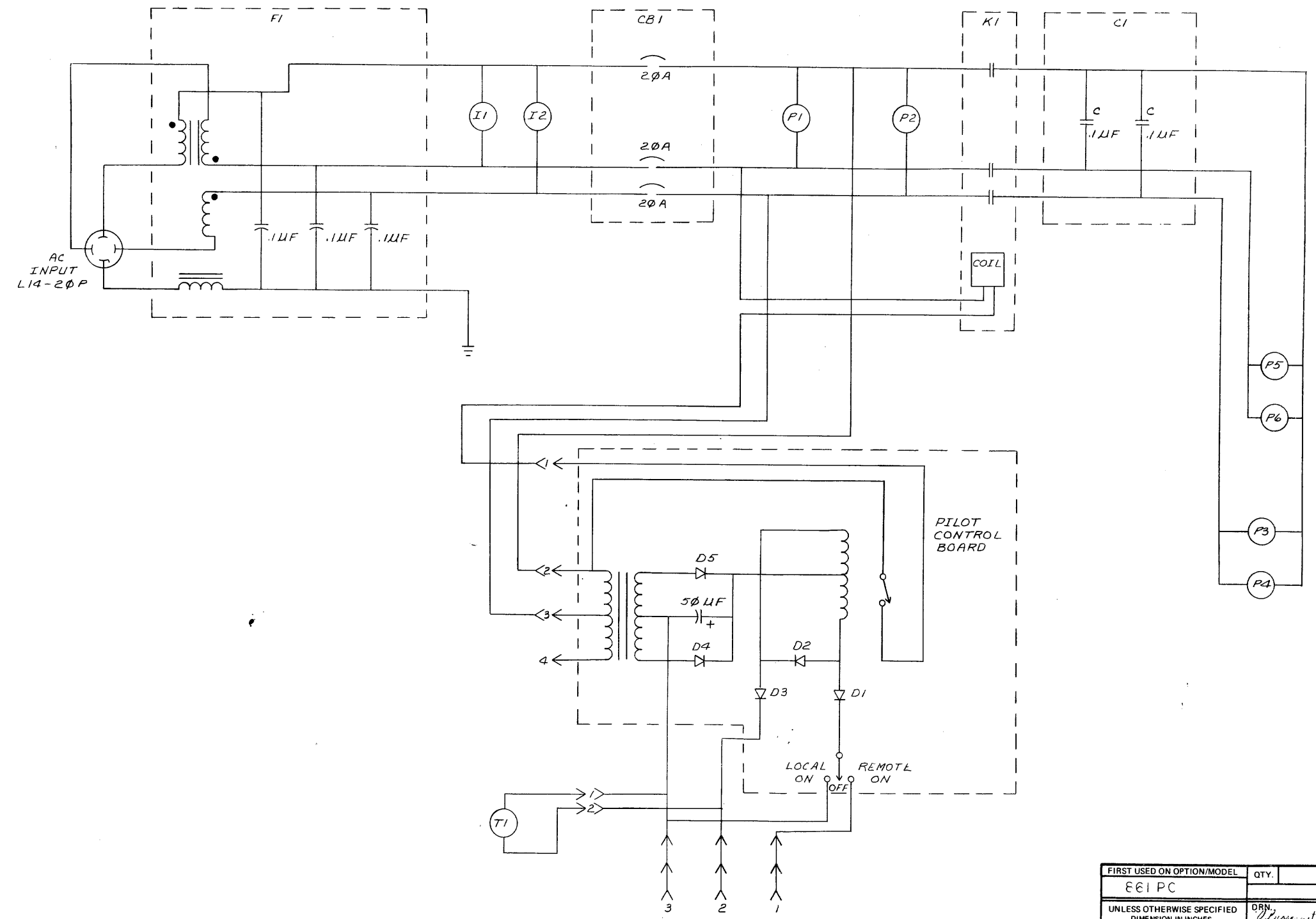
| FIRST USED ON OPTION MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|-------------------------------|--------------------|--|-------------|
| 861 PC. | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES | DRN. <i>[Signature]</i> | DATE <i>[Date]</i> | digital EQUIPMENT CORPORATION MILITARY RESEARCH CENTER | |
| TOLERANCES | CHK'D. <i>[Signature]</i> | DATE <i>[Date]</i> | | |
| DECIMALS | ENG. <i>[Signature]</i> | DATE <i>[Date]</i> | TITLE PILOT CONTROL | |
| ANGLES | PROJ. ENG. <i>[Signature]</i> | DATE <i>[Date]</i> | | |
| .XXX - .006 XX - .01 X - .1 | PROD. <i>[Signature]</i> | DATE <i>[Date]</i> | | |
| REMOVES BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | NEXT HIGHER ASSY. | | SIZE CODE | NUMBER |
| MATERIAL | | | DCS | 5410206-0-1 |
| FINISH | | | SHEET 2 OF 2 | REV A |

REVISIONS
CHANGE NO.
BY
DATE

DCS 5410206-0-1

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REV. 1-2-72 3000 3215 2



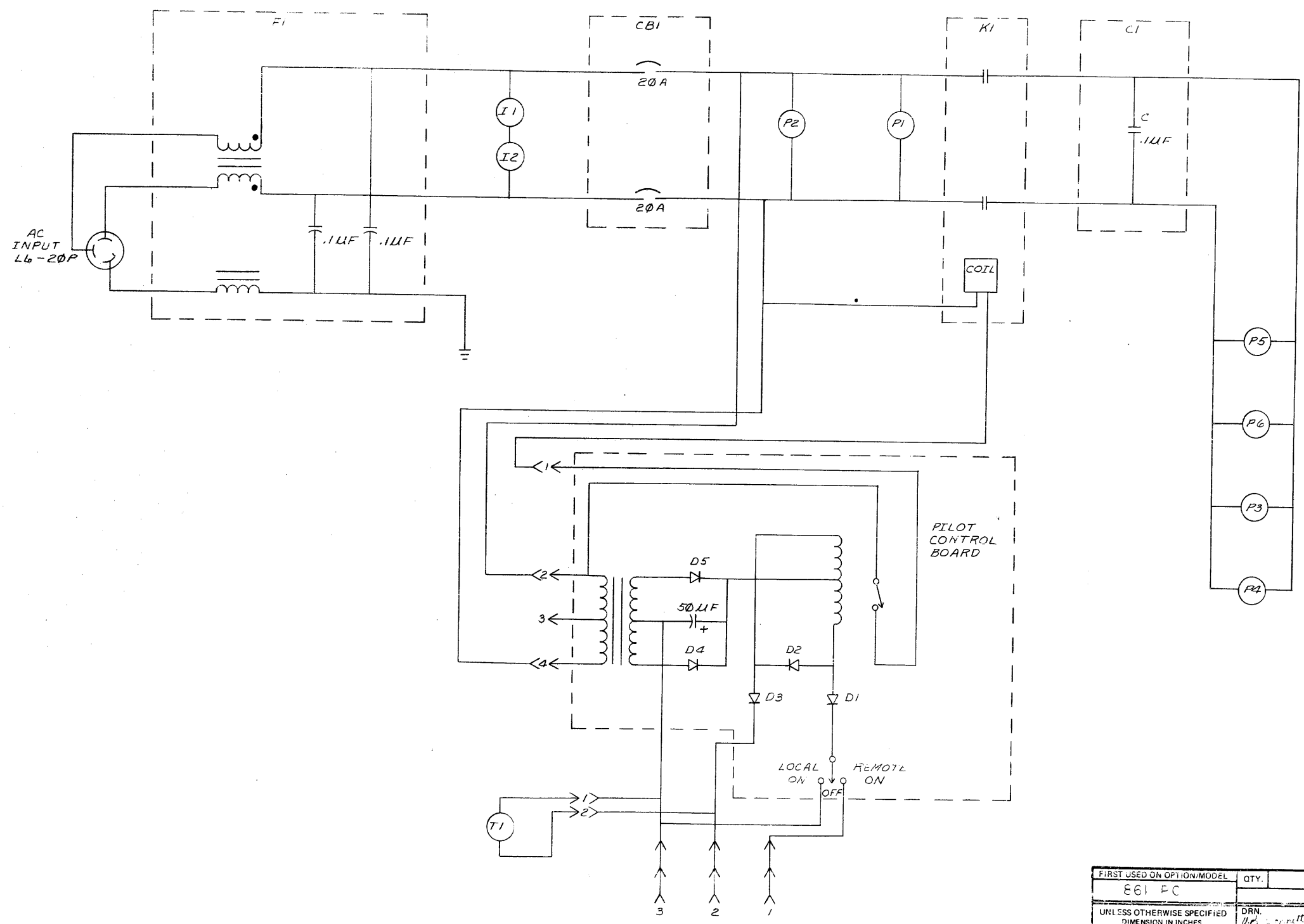
| | |
|------------|--|
| REV. | |
| CHG. | |
| REVISIONS | |
| CHANGE NO. | |

FORM NO. 100-A

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|-----------------------|-----------------|--|-------------------|
| E61 PC | | PARTS LIST | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN D. Cassinelli | DATE 9-11-72 | digital EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small> | |
| DECIMALS | CHK'D R. S. ... | DATE 10-6-72 | | |
| ANGLES | ENG. R. ... | DATE 10-6-72 | | |
| .XXX = .005 .XX = .02 .X = .1 | PROJ. ENGR. S. ... | DATE 10-1-72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD. L. ... | DATE 10-1-72 | TITLE CIRCUIT SCHEMATIC (E61-PC) | |
| MATERIAL | NEXT HIGHER ASSY. | B DD-811-0 | SIZE CODE DCS | NUMBER E61-A-1 |
| FINISH | SCALE | SHEET | DIST | REV. |

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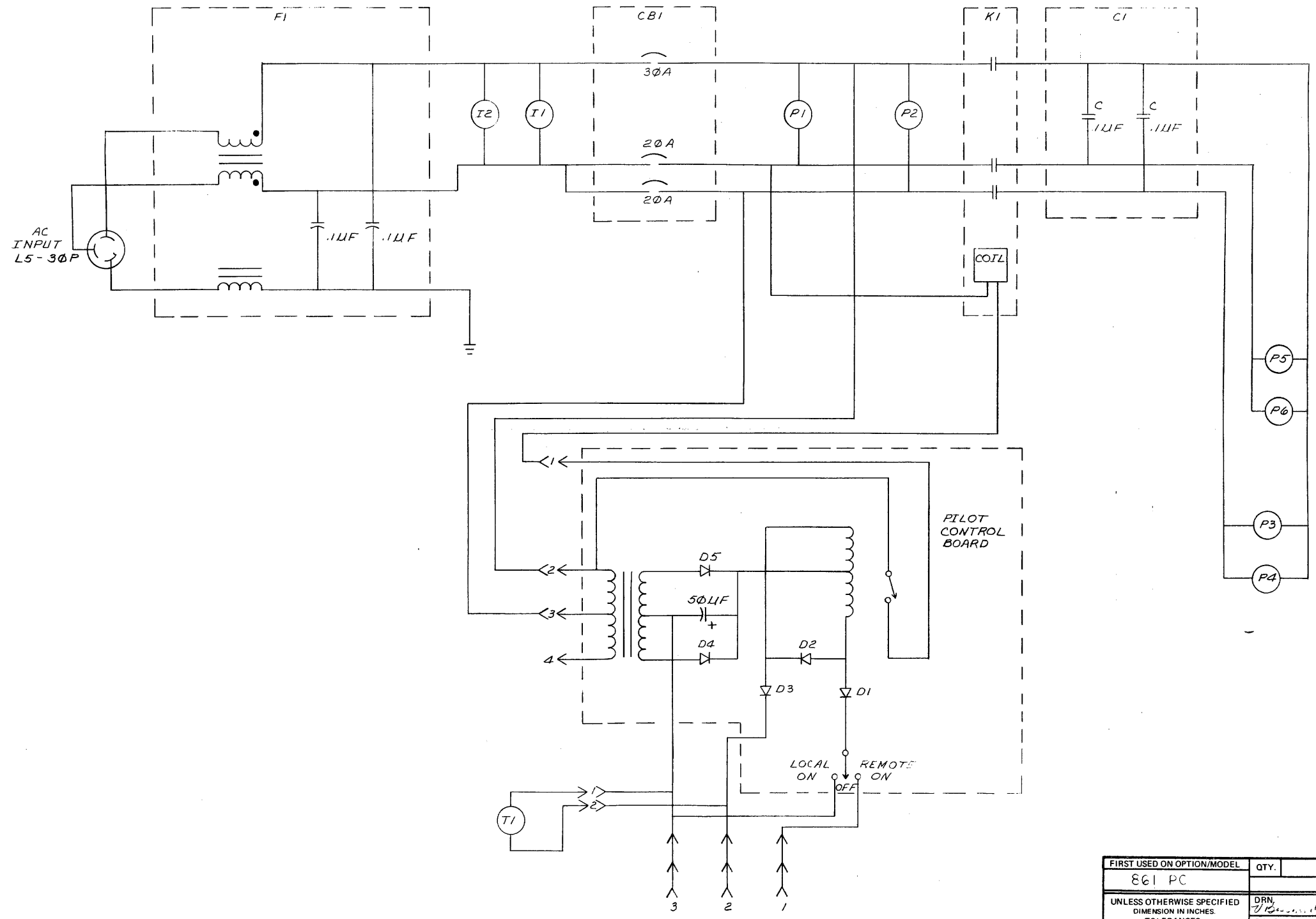
REV. 2



| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|-------------------------------|-----------------|--|----------|
| 861 PC | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN <i>U.S. ...</i> | DATE 9-11-72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS | CHK'D <i>...</i> | DATE 11-2-72 | | |
| ANGLES | ENG. <i>...</i> | DATE 10-6-72 | TITLE CIRCUIT SCHEMATIC (A-B-C) | |
| .XXX ± .005 .XX ± .02 X = 1 | PROJ. ENG. <i>...</i> | DATE 10/6/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD. <i>...</i> | DATE 1-10-72 | SIZE CODE NUMBER REV. D CS 861-B-1 | |
| MATERIAL | NEXT HIGHER ASSY. B-21-501 | SCALE | | |
| FINISH | SHEET | OF | DIST. | |

| REV. | CHANGE NO. | REVISIONS |
|------|------------|-----------|
| | | |

DFC FORM 110
DRD 100-A



| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|-------------------|------------------------|-----------------|---|
| 861 PC | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN 9-17-72 | DATE 9-17-72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE CIRCUIT SCHEMATIC 861-C P.C. |
| DECIMALS | ANGLES | CHK'D 10-6-72 | DATE 10-6-72 | |
| .XXX = .005 | ± 0° 30' | ENG R. B. G. | DATE 10-6-72 | |
| .XX = .02 | | PROB. ENGR 10-6-72 | DATE 10-6-72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. 10-1-72 | DATE 10-1-72 | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE D-861-C-1 | | NUMBER 861-C-1 |
| FINISH | SCALE | SHEET | | REV. |

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| | | |
|------------------------|------------|------|
| BRUNING 40-107 1988 | REVISIONS | REV. |
| DEC FORM NO. DRD 100-A | CHANGE NO. | |
| CHK | | |

REV. 1
NUMBER CS 861-C-1

**DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS**

PACKAGING INSTRUCTION

REV: A DATE: 4-73

TITLE 861 POWER CONTROL, INTERPLANT PACKAGE

MATERIAL REQUIREMENTS

| Quantity | Identification No. | Purchase Spec | Description |
|----------|--------------------|---------------|-------------------------------------|
| 1 | 7-2008 1314 0500-0 | 9905229 | Full overlap carton |
| 2 | | 9905228 | Expanded polystyrene foam insert |
| A/R | | | 3-inch wide Glasflex tape |

PACKAGING INSTRUCTIONS

| Step | Procedure |
|------|--|
| 1 | Set up the full over lap carton (9905229) using one strip of tape across the bottom and extending up the sides approximately three inches. See Figure 1. |
| 2 | Place one expanded polystyrene foam insert (9905228) in each end of the carton with the slots in the foam facing inward. |
| 3 | Place the 861 power control in the carton with the ears of the upright sliding into the slots in the foam. |
| 4 | Coil the power cord so that it fits into the cavity in the rear of the power control. |
| 5 | Close and seal the carton with one piece of tape across the top of the carton and extending down the sides approximately three inches. |

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| | | | | | |
|-----------------------------|--|-----------|------------|-----------------------|----------|
| ENG <i>R. J. Collins</i> | 4/15/73 APPD <i>William P. ...</i> | SIZE A | CODE PI | NUMBER 3700083-0-0 | REV A |
|-----------------------------|--|-----------|------------|-----------------------|----------|

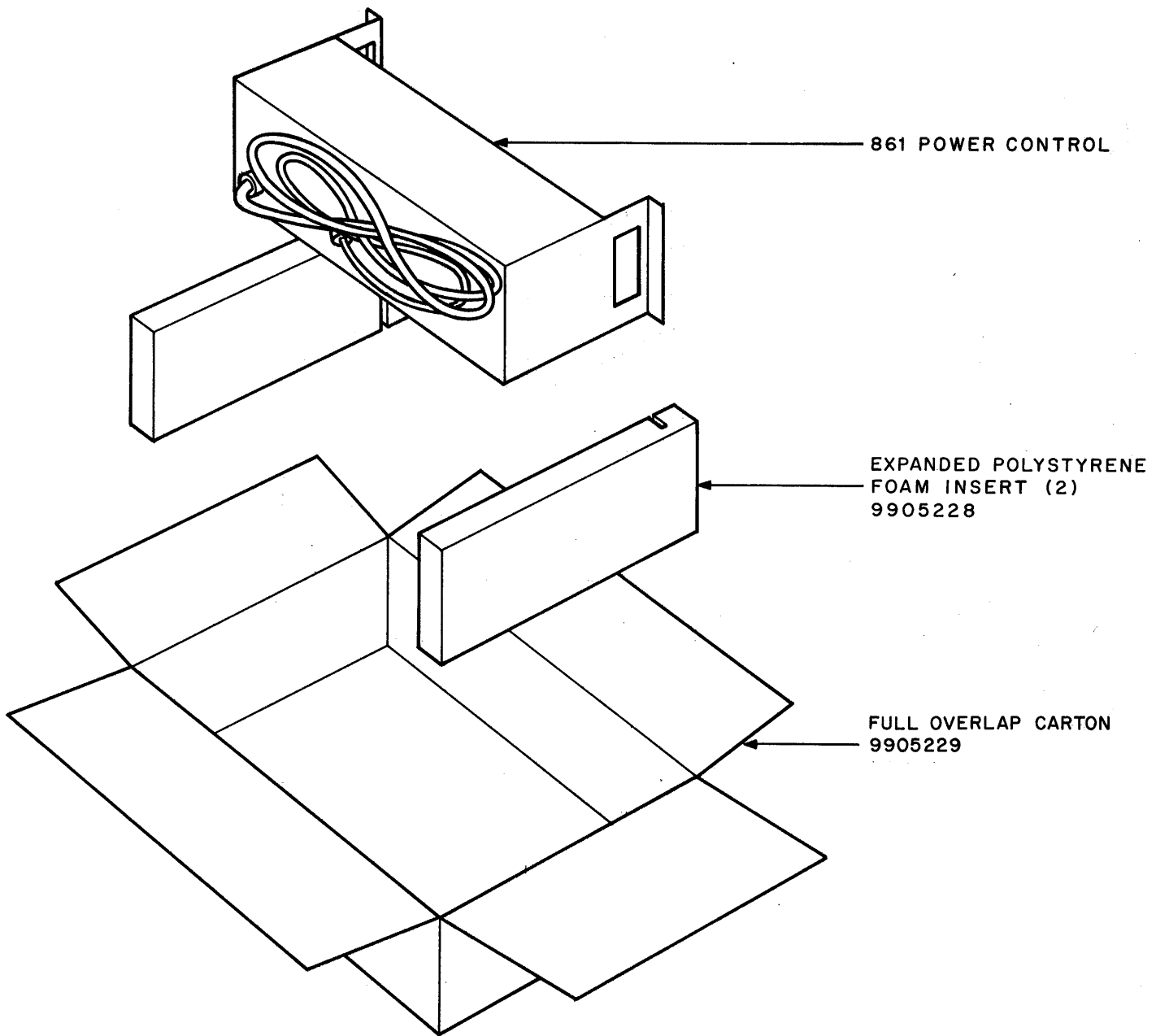
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PACKAGING INSTRUCTION

REV: A DATE: 4/73

TITLE 861 POWER CONTROL , INTERPLANT PACKAGE

FIGURE 1



NOTE
Make changes to the "C" size original only and rephotograph.

| | | | | | |
|---|---|-----------|------------|-----------------------|----------|
| ENG. <i>Wilford M. Patton 12/11/72</i> | APPD. <i>J. W. Lawrence 12/11/72</i> | SIZE A | CODE PI | NUMBER 3700083-0-0 | REV A |
|---|---|-----------|------------|-----------------------|----------|

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET [] [] [] [] [] [] [] [] [] []

DRAWING DIRECTORY
CIRCUIT SCHEMATIC
PWR CONTROL BOARD
CIRCUIT SCHEMATIC
UNIT ASSEMBLY H742
UNIT ASSEMBLY (PL)

SEQUENCE

| |
|------------------|
| B-DD-H742-Ø |
| D-CS H742-Ø-1 |
| E-1A 5409730-0-0 |
| C-CS 5409730-0-1 |
| E-UA-H742-Ø-Ø |
| A-PL-H742-Ø-Ø |

SEQUENCE

MFG SET

| |
|------------------|
| A-SP-H742 Ø-3 |
| A-SP-H742-Ø-8 |
| A-PI-3700073-0-0 |

TEST PROCEDURE

MFG SPEC.

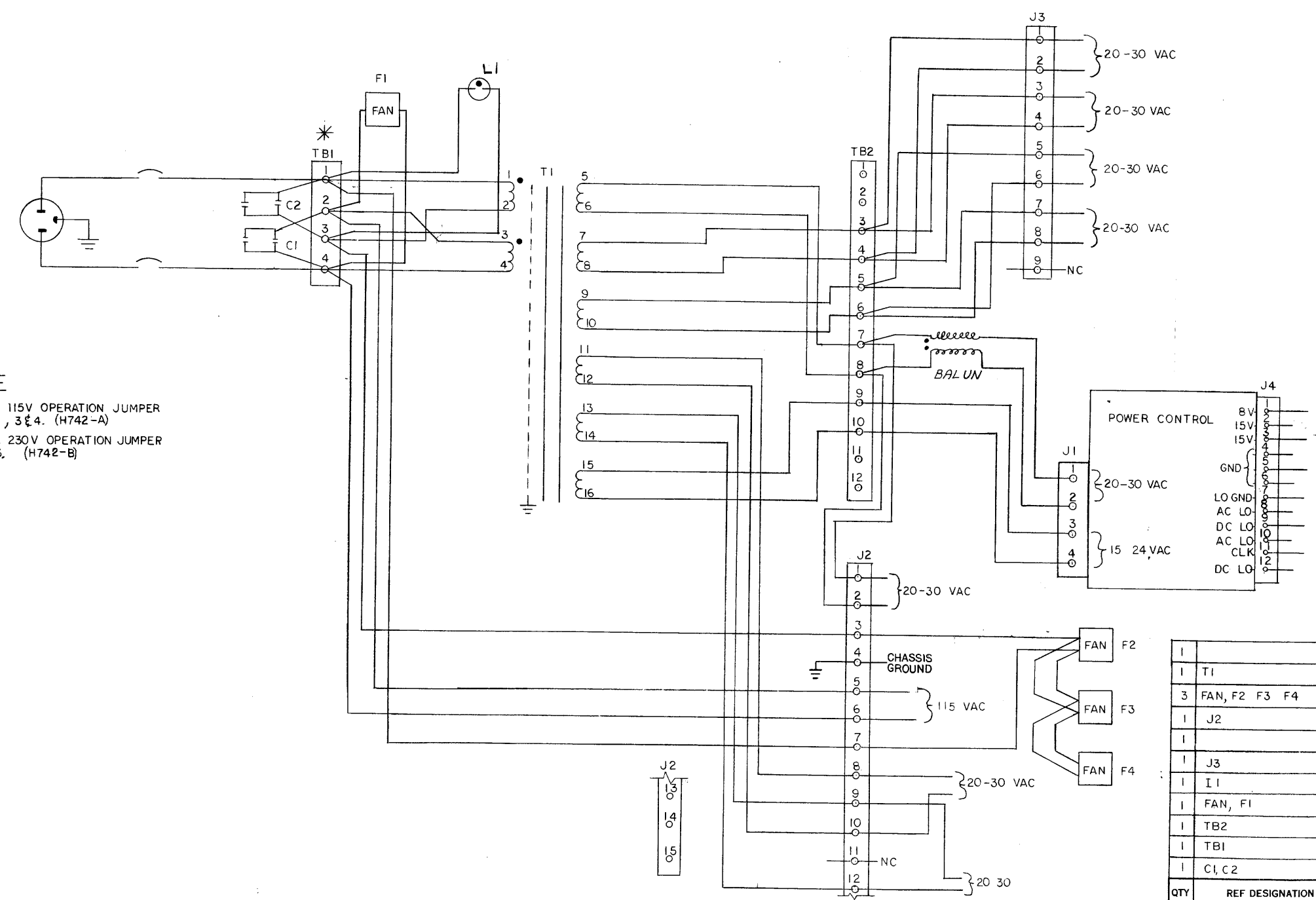
PACKAGING INSTRUCTION

| UNIT VARIATIONS | | PRINT SET TYPE | | | | |
|-----------------|---------------------|----------------|--|--|--|--|
| VARIATION | TITLE | H742-1 | | | | |
| H742-A | CHASSIS ASSY (115V) | X | | | | |
| H742-B | CHASSIS ASSY (230V) | X | | | | |
| H742-C | CHASSIS ASSY (115V) | X | | | | |
| H742-D | CHASSIS ASSY (230V) | X | | | | |
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| REVISIONS | DATE | CHG. NO. | REV |
|-----------|-------|----------|-----|
| | | | |
| | 7/72 | H742-2 | A |
| | 7/72 | H742-3 | B |
| | 8/72 | H742-4 | C |
| | 8/72 | H742-5 | D |
| | 10/72 | H742-7 | E |
| | 11/72 | H742-8 | F |
| | 12/72 | H742-11 | H |
| | 2/73 | H742-12 | J |
| | 2/73 | H742-13 | K |
| | 2-73 | H742-14 | L |
| | 4-73 | H742-15 | M |
| | 4-73 | H742-16 | N |
| | 5-73 | H742-17 | P |
| | 6-73 | H742-18 | R |
| | 12-73 | H742-19 | S |
| | 3-74 | H742-20 | T |
| | 4-74 | H742-21 | U |

| | | | |
|-----------------------------------|----------------------------------|----------------|----------------------------|
| USED ON OPTION/MODEL 11/45 | DRN. D. FONTAINE | DATE 13172 | TITLE CHASSIS ASSY H742 |
| | CHK'D. <i>[Signature]</i> | DATE 2-6-72 | |
| | PROJ. ENG. <i>[Signature]</i> | DATE 2-4-72 | |
| PROD. <i>[Signature]</i> | DATE 2-24-72 | | |
| FIELD SERV. <i>[Signature]</i> | DATE 2-7-72 | | |
| | SHEET 1 OF 3 | DIST | REV U |

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NOTE
 * FOR 115V OPERATION JUMPER
 1 & 2, 3 & 4. (H742-A)
 FOR 230V OPERATION JUMPER
 2 & 3. (H742-B)

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|-------------------------|------------|----------|
| 1 | | POWER CONTROL | 5409730 | 11 |
| 1 | T1 | XMFR | 1610857 | 10 |
| 3 | FAN, F2 F3 F4 | FAN SUPER BOXER | 1209403-1 | 9 |
| 1 | J2 | MATE-N-LOCK | 1209350-15 | 8 |
| 1 | | BALUN ASSY | 1611444 | 7 |
| 1 | J3 | MATE-N-LOCK | 1209350-9 | 6 |
| 1 | I1 | LIGHT PILOT | 1201280 | 5 |
| 1 | FAN, F1 | FAN PEWEE | 1210719 | 4 |
| 1 | TB2 | JONES STRIP | 9006917 | 3 |
| 1 | TB1 | JONES STRIP | 9006902 | 2 |
| 1 | C1, C2 | CAPACITOR 2 X 1JF 1000V | 1010193 | 1 |

| REV | DATE | BY | CHK |
|-----|---------|-----------|-----|
| 1 | 1-7-74 | R. WOLF | |
| 2 | 1-3-74 | R. WOLF | |
| 3 | 6-25-73 | R. WOLF | |
| 4 | 6-21-73 | R. WOLF | |
| 5 | 6-15-73 | R. WOLF | |
| 6 | 5-28-73 | R. WOLF | |
| 7 | 7-14-72 | G. POTTER | |
| 8 | 6-25-72 | G. POTTER | |
| 9 | 5-23-72 | G. POTTER | |
| 10 | 5-23-72 | G. POTTER | |

| | | |
|-----------|------|---------|
| DRM | DATE | 2-3-72 |
| CHKD | DATE | 2-7-72 |
| ENG | DATE | 2-7-72 |
| PROJ. ENG | DATE | 2-9-72 |
| PROP. | DATE | 2-24-72 |

digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

TITLE
 CIRCUIT SCHEMATIC
 H742

SIZE CODE DCS H742-0-1 NUMBER 3000 215 2 REV. E

ETCH BOARD REV

SEMICONDUCTOR CONVERSION CHART

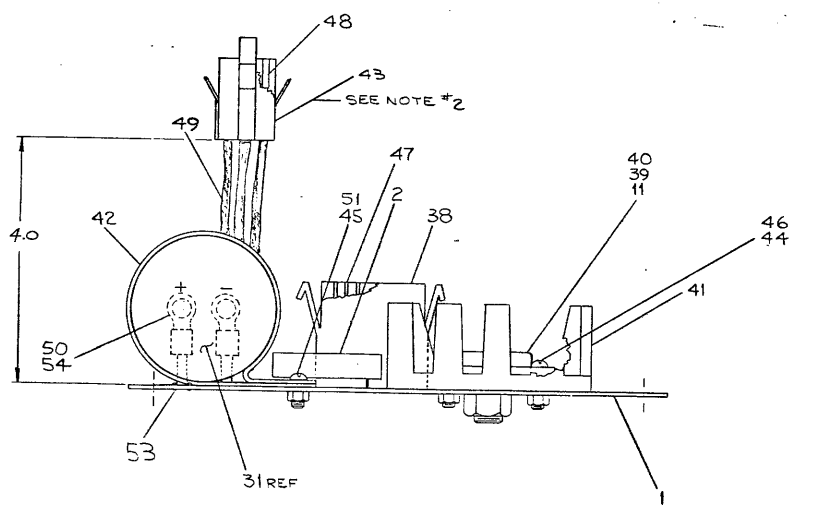
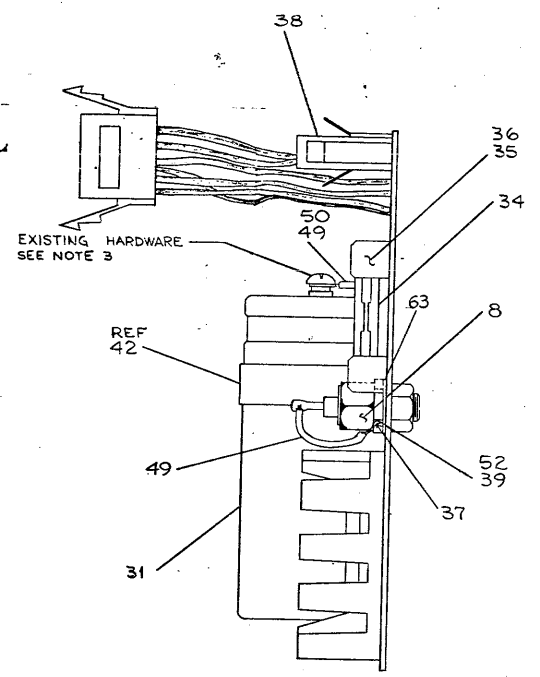
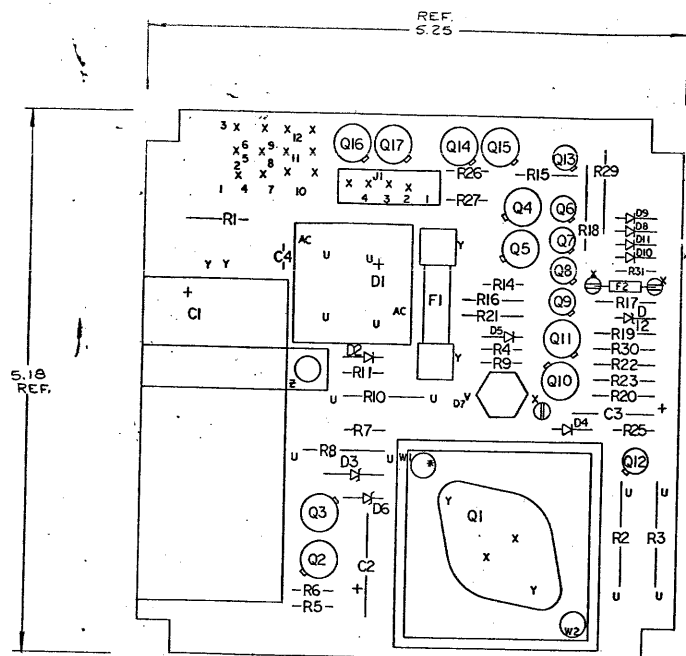
DEC NO. EIA NO. DEC NO. EIA NO.

SHEET OF

The drawing and parts list herein shall be the only means of obtaining information and shall not be construed as a contract or a statement of work or any other representation or warranty.

NOTES:

1. APPLY ITEM #39 (COMPOUND) BETWEEN TRANSISTOR (Q1) AND ITEM #40 (WASHER) ALSO BETWEEN WASHER & HEAT SINK. ITEM #41 ALSO BETWEEN HEATSINK AND ETCHED BOARD ITEM #1.
2. CONNECTIONS BETWEEN P.C. BOARD AND MATE-N-LOCK CONNECTOR (ITEMS #43 & 44) ARE TO BE MADE POINT TO POINT.
3. HARDWARE FOR ITEM #31 IS SUPPLIED UNLESS OTHERWISE SPECIFIED.



| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|------------------------------|-------------------------------|--------------------|----------|
| 1 | R9 | 1K 2W 10% | 1300369 | 65 |
| 1 | F2 | FUSE, PICO 1/4 AMP | 1210929-4 | 64 |
| 1 | | FLAT WASHER | 9006664 | 63 |
| 2 | | NUT, KEPS #6-32 | 9006560 | 62 |
| 2 | | SCR, PPH #6-32 X 7/16 LG | 9006023-1 | 61 |
| 1 | C4 | CAP. 22 Uf 50V | 1010274 | 60 |
| 1 | R29 | RESISTOR 2K, 1/2W, 1% | 1302329 | 59 |
| 1 | R17 | RESISTOR 3.48K, 1/8W, 1% | 1305114 | 58 |
| 1 | R19 | RESISTOR 3.16K, 1/8W, 1% | 1303045 | 57 |
| 1 | R30 | RESISTOR 10, 1/4W, 5% | 130317 | 56 |
| 1 | R20 | RESISTOR 4.64K, 1/8W, 1% | 1304856 | 55 |
| A/R | | M5 AWG 60% WIRE | 9007561-3 | 54 |
| 2 | | EYELET GS-4-3 | 9007836 | 53 |
| 1 | | SPACER #10 | 9006825 | 52 |
| 1 | | KEPS NUT #6-32 | 9006523 | 51 |
| 2 | | TERMINAL RING | 9007930 | 50 |
| A/R | | #18 AWG 19 STRD TEF INS (BLK) | 9107560-0 | 49 |
| 12 | | CONTACTS FEMALE (CRIMP) | 1209379 | 48 |
| 4 | | CONTACTS FEMALE (BOARD) | 1209456 | 47 |
| 2 | | SCR PPH PAN HD #6 40X1/2 LG | 9006018-1 | 46 |
| 1 | | SCR PPH PAN HD #6-32 X 3/8 LG | 9006037-1 | 45 |
| 2 | | NUT, KEPS #4-40 | 9006557 | 44 |
| 1 | | MATE-N-LOCK (12 PIN) | 1209350-43 | 43 |
| 1 | | C-CLAMP 1.50 | 9007095-1 | 42 |
| 1 | | HEAT SINK | 1205817 | 41 |
| 1 | | INSULATOR, WASHER | 9006721 | 40 |
| A/R | | COMPOUND THERMAL JOINT | 9008265 | 39 |
| 1 | | MATE-N-LOCK (4 PIN) | 1209350-4 | 38 |
| 3 | | SPLIT LOG M-1033 | 9006735 | 37 |
| 2 | | EYELET GS-4-7 | 9007372 | 36 |
| 2 | | FUSE CLIP | 9007203 | 35 |
| 1 | F1 | FUSE AGC 5 | 9007221 | 34 |
| 1 | C3 | CAP 20 uF @ 60V 5% | 1010716 | 33 |
| 1 | C2 | CAP 50 uF @ 25V | 1007196 | 32 |
| 1 | C1 | CAP 5.0K uF @ 40V | 1010540 | 31 |
| 1 | R23 | RESISTOR 2.0K 1/2W 1% | 1302715 | 30 |
| 1 | R18 | RESISTOR 2.49K 1/2W 1% | 1300924 | 29 |
| 3 | R16, R21, R22 | RESISTOR 10K 1/8W 1% | 130332 | 28 |
| 1 | R15 | RESISTOR 27.4K 1/8W 1% | 1309417 | 27 |
| 1 | R30 | RESISTOR 24.3K 1/8W 1% | 1309418 | 26 |
| 4 | R14, R25, R26, R27 | RESISTOR 470 ohm 1/4W, 5% | 1300316 | 25 |
| 1 | R11 | RESISTOR 560 1/4W, 5% | 1301890 | 24 |
| 1 | R10 | RESISTOR 390 ohm 2W, 10% | 1301890 | 23 |
| 1 | R6 | RESISTOR 1.5K 1/2W, 5% | 1300924 | 22 |
| 1 | R7 | RESISTOR 270 1/4W, 5% | 1301972 | 21 |
| 2 | R6, R9 | RESISTOR 1K 1/4W, 5% | 1300365 | 20 |
| 1 | R8 | RESISTOR 5.1K 1/4W, 5% | 1309422 | 19 |
| 1 | R4 | RESISTOR 390 1/4W, 5% | 1300303 | 18 |
| 2 | R2, R3 | RESISTOR 200 ohm 5W, 5% | 1309639 | 17 |
| 1 | R1 | RESISTOR 59K 1/2W, 5% | 1300443 | 16 |
| 4 | Q5, Q11, Q13, Q17 | TRANSISTOR 2N1309 | 150131 | 15 |
| 4 | Q4, Q10, Q14, Q16 | TRANSISTOR 2N1306 | 1500583 | 14 |
| 7 | Q3, Q6, Q7, Q8, Q9, Q12, Q13 | TRANSISTOR MPSA55 | 150706 | 13 |
| 1 | Q2 | TRANSISTOR DEC 2219 | 1501881 | 12 |
| 1 | Q1 | TRANSISTOR MJ3600 | 1511349 | 11 |
| 1 | D12 | DIODE 5.1V 1MA | 1110925 | 10 |
| 4 | D8, THRU D11 | DIODE 1N4002 | 1104861 | 9 |
| 1 | D7 | DIODE 1N2970B | 1100134 | 8 |
| 1 | D6 | DIODE 1N746A | 1104860 | 7 |
| 1 | D5 | DIODE D464 | 1100114 | 6 |
| 1 | D4 | DIODE 1N4001 | 1102942 | 5 |
| 1 | D3 | DIODE 1N5353B | 1100854 | 4 |
| 1 | D2 | DIODE .4MS, 1Z1 5.1V 1% | 1105873 | 3 |
| 1 | D1 | DIODE BRIDGE NSS 3514 | 1110714 | 2 |
| | | POWER CONTROL BOARD | DIA-5009730-0 | 1 |
| | | MODULE ECO HISTORY | 5-MH-5009730-0-REF | |
| | | X-Y COORDINATE HOLE LOCATION | KCO-5409730-0-REF | |
| | | CIRCUIT SCHEMATIC | CCS-5409730-0-REF | |

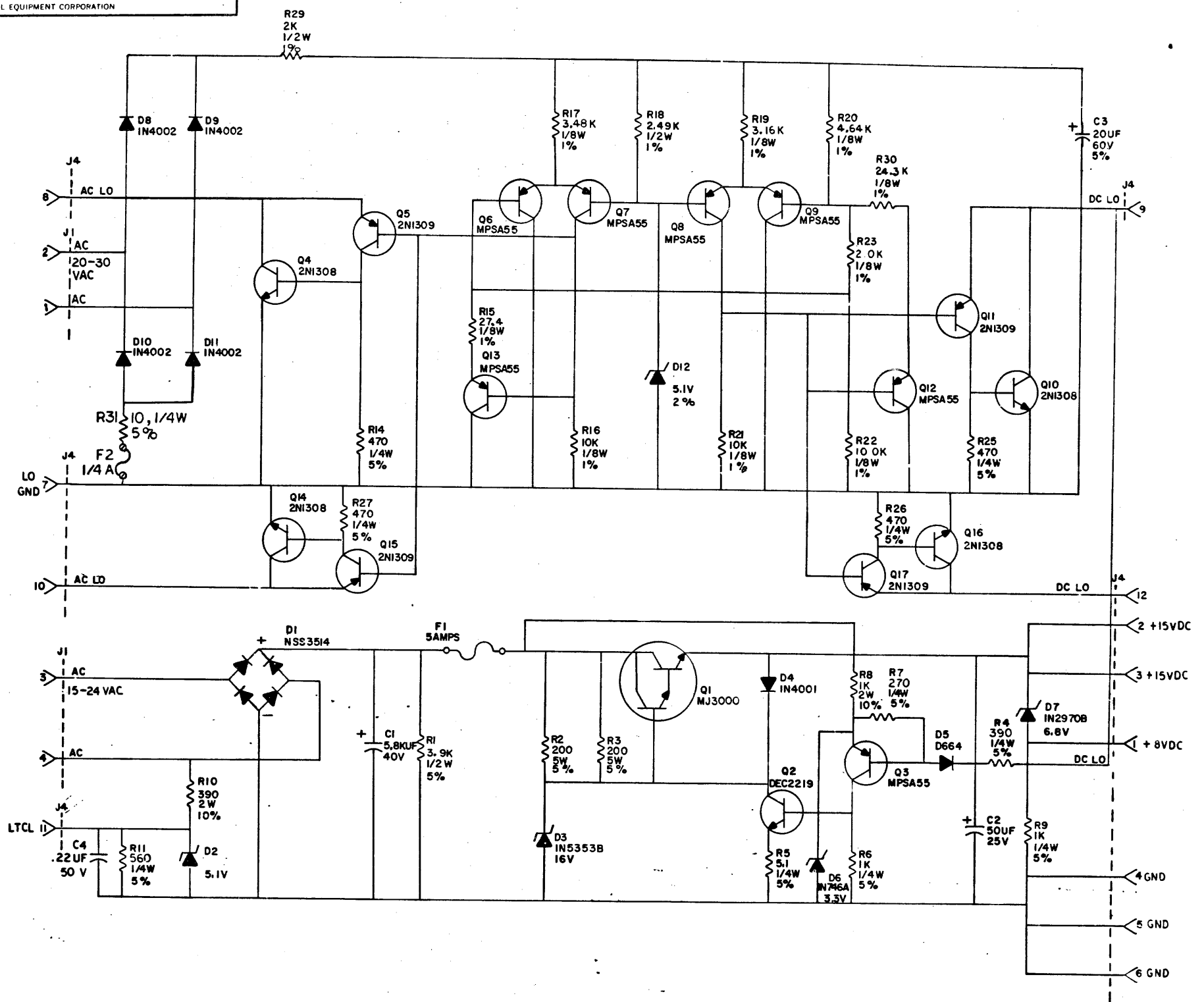
| IC TYPE | GROUND | +5V | | | | | |
|------------------|--------|-----|--|--|--|--|--|
| IC PIN LOCATIONS | | | | | | | |
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| REV | DESCRIPTION | DATE | BY | CHKD | APP'D |
|-----|-------------|----------|----|------|-------|
| 1 | INITIAL | 11/27/72 | | | |
| 2 | REVISED | 11/27/72 | | | |
| 3 | REVISED | 11/27/72 | | | |
| 4 | REVISED | 11/27/72 | | | |
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| 62 | REVISED | 11/27/72 | | | |
| 63 | REVISED | 11/27/72 | | | |
| 64 | REVISED | 11/27/72 | | | |
| 65 | REVISED | 11/27/72 | | | |

| | | | | | |
|-------------------------|------------------|------------|---------|---------------------------|-------|
| FIRST USED ON OPT. MOD. | | PARTS LIST | | EQUIPMENT | |
| H742 | ETCH BOARD REV E | 3064 | N3608 | POWER CONTROL BOARD 11/45 | |
| DEC NO. | EIA NO. | DEC NO. | EIA NO. | SCALE | SHEET |
| | | | | | |

SEMICONDUCTOR CONVERSION CHART

THIS SCHEMATIC IS FURNISHED ONLY FOR TEST AND MAINTENANCE PURPOSES. THE CIRCUITS ARE PROPRIETARY IN NATURE AND SHOULD BE TREATED ACCORDINGLY. COPYRIGHT 1972 BY DIGITAL EQUIPMENT CORPORATION



| REV | CHG | NO | REV |
|-----|-------|----|-----|
| 1 | 00001 | C | |
| 2 | 00002 | D | |
| 3 | 00003 | E | |
| 4 | 00004 | F | |
| 5 | 00005 | G | |
| 6 | 00006 | H | |
| 7 | 00007 | I | |
| 8 | 00008 | J | |
| 9 | 00009 | K | |
| 10 | 00010 | L | |
| 11 | 00011 | M | |
| 12 | 00012 | N | |
| 13 | 00013 | O | |
| 14 | 00014 | P | |
| 15 | 00015 | Q | |
| 16 | 00016 | R | |
| 17 | 00017 | S | |
| 18 | 00018 | T | |
| 19 | 00019 | U | |
| 20 | 00020 | V | |
| 21 | 00021 | W | |
| 22 | 00022 | X | |
| 23 | 00023 | Y | |
| 24 | 00024 | Z | |

| ORIG | DATE | TRANSISTOR & DIODE CONVERSION CHART |
|-----------|---------|-------------------------------------|
| G. COOPER | 2/24/72 | DEC2219 → 2N2219 |
| | 3-1-72 | IN5231 → IN5231 |
| | | MPSA55 → SAME |
| | | MJ3000 → IN751A |
| | | IN4002 → IN4001 |
| | | IN4002 → IN4001 |
| | | D664 → IN746A |
| | | D664 → IN3606 |

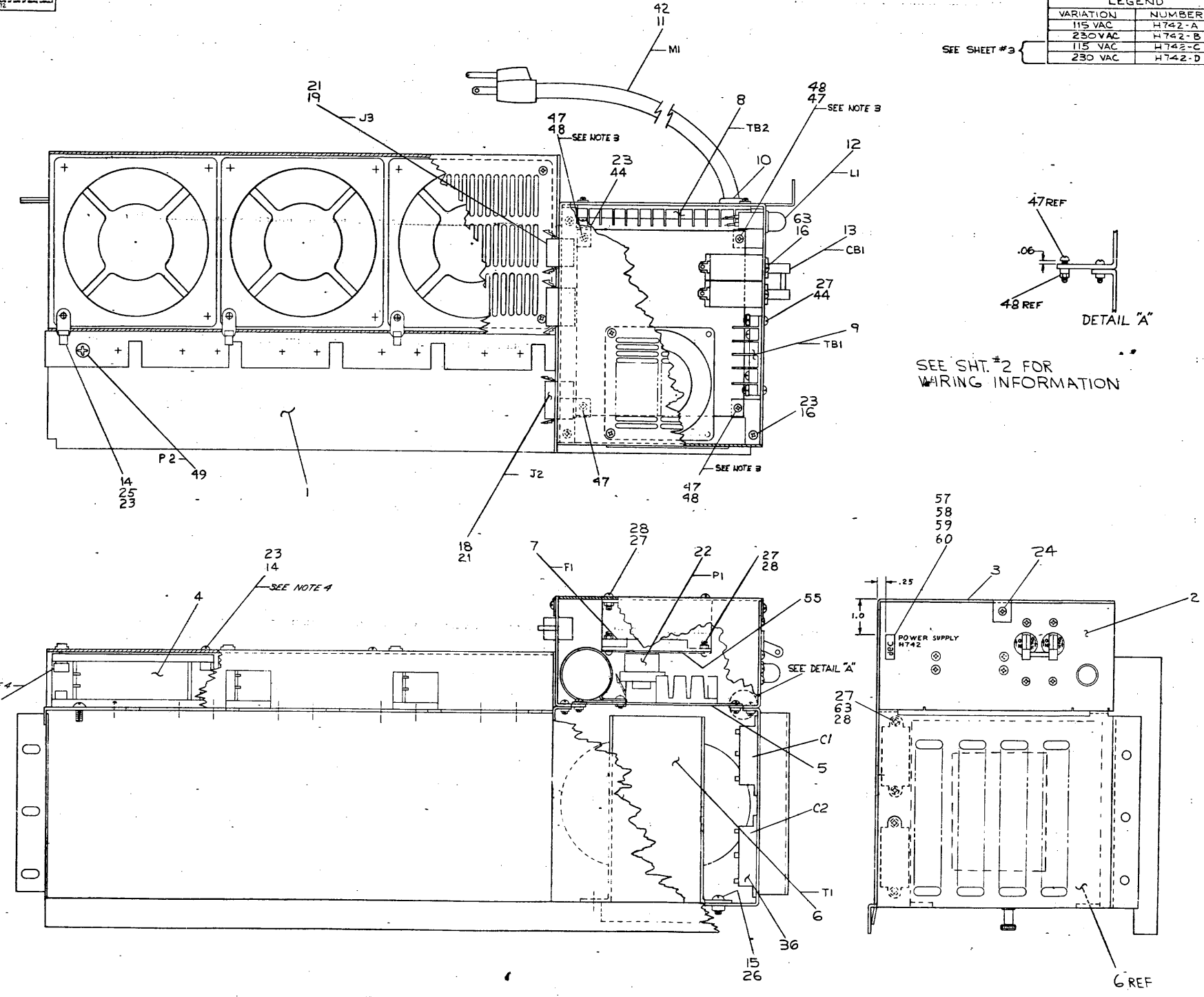
Digital EQUIPMENT CORPORATION
 MATNARD, MASSACHUSETTS

TITLE: POWER CONTROL BD.
 SIZE: C CS
 NUMBER: 5409730-0-1
 REV: N

PRINTED CIRCUIT REV: E

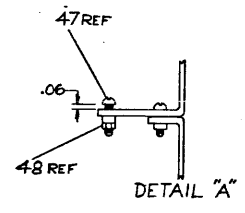
REV N
 NUMBER 5409730-0-1
 SIZE CODE C CS

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| LEGEND | |
|-----------|--------|
| VARIATION | NUMBER |
| 115 VAC | H742-A |
| 230 VAC | H742-B |
| 115 VAC | H742-C |
| 230 VAC | H742-D |

- NOTES:**
- ITEM #22 (MALE CONTACTS) ARE TO BE INSERTED INTO MALE CONNECTING BLOCK, IN APPROPRIATE CABLE TO, J2.
 - ITEM #49 WILL BE INSTALLED DURING FINAL ASSEMBLY.
 - ITEMS #47 & 48 SHOULD BE TIGHTENED AS SHOWN TO ALLOW $1/16$ CLEARANCE FOR INSERTION AND REMOVAL OF 5409730.
 - FOR IMC FAN WS 2107F-110-01 USE ITEMS 14 & 23. FOR ROT-CT FAN 3A2 AND HOWARD FAN 9-30-8120 USE ITEMS 64 & 65.
 - TO ALLOW PROPER SERVICE LOOP WIRES TO C-1 SHOULD BE 6 INCHES LONG AND WIRES TO C-2 SHOULD BE 9 INCHES LONG.
 - ROUTE ALL AC WIRING (ESPECIALLY TRANSFORMER LEADS 1, 2, 3 & 4) AS FAR AWAY AS POSSIBLE FROM 5409730 CONTROL BOARD.



SEE SHT. #2 FOR WIRING INFORMATION

| QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|-------|-------------------|----------|----------|
| 11/45 | POWER SUPPLY H742 | | |
| 1 | COVER | 1 | |
| 1 | TERMINAL BLOCK | 2 | |
| 1 | TERMINAL BLOCK | 3 | |
| 1 | TERMINAL BLOCK | 4 | |
| 1 | TERMINAL BLOCK | 5 | |
| 1 | TERMINAL BLOCK | 6 | |
| 1 | TERMINAL BLOCK | 7 | |
| 1 | TERMINAL BLOCK | 8 | |
| 1 | TERMINAL BLOCK | 9 | |
| 1 | TERMINAL BLOCK | 10 | |
| 1 | TERMINAL BLOCK | 11 | |
| 1 | TERMINAL BLOCK | 12 | |
| 1 | TERMINAL BLOCK | 13 | |
| 1 | TERMINAL BLOCK | 14 | |
| 1 | TERMINAL BLOCK | 15 | |
| 1 | TERMINAL BLOCK | 16 | |
| 1 | TERMINAL BLOCK | 17 | |
| 1 | TERMINAL BLOCK | 18 | |
| 1 | TERMINAL BLOCK | 19 | |
| 1 | TERMINAL BLOCK | 20 | |
| 1 | TERMINAL BLOCK | 21 | |
| 1 | TERMINAL BLOCK | 22 | |
| 1 | TERMINAL BLOCK | 23 | |
| 1 | TERMINAL BLOCK | 24 | |
| 1 | TERMINAL BLOCK | 25 | |
| 1 | TERMINAL BLOCK | 26 | |
| 1 | TERMINAL BLOCK | 27 | |
| 1 | TERMINAL BLOCK | 28 | |
| 1 | TERMINAL BLOCK | 29 | |
| 1 | TERMINAL BLOCK | 30 | |
| 1 | TERMINAL BLOCK | 31 | |
| 1 | TERMINAL BLOCK | 32 | |
| 1 | TERMINAL BLOCK | 33 | |
| 1 | TERMINAL BLOCK | 34 | |
| 1 | TERMINAL BLOCK | 35 | |
| 1 | TERMINAL BLOCK | 36 | |
| 1 | TERMINAL BLOCK | 37 | |
| 1 | TERMINAL BLOCK | 38 | |
| 1 | TERMINAL BLOCK | 39 | |
| 1 | TERMINAL BLOCK | 40 | |
| 1 | TERMINAL BLOCK | 41 | |
| 1 | TERMINAL BLOCK | 42 | |
| 1 | TERMINAL BLOCK | 43 | |
| 1 | TERMINAL BLOCK | 44 | |
| 1 | TERMINAL BLOCK | 45 | |
| 1 | TERMINAL BLOCK | 46 | |
| 1 | TERMINAL BLOCK | 47 | |
| 1 | TERMINAL BLOCK | 48 | |
| 1 | TERMINAL BLOCK | 49 | |
| 1 | TERMINAL BLOCK | 50 | |
| 1 | TERMINAL BLOCK | 51 | |
| 1 | TERMINAL BLOCK | 52 | |
| 1 | TERMINAL BLOCK | 53 | |
| 1 | TERMINAL BLOCK | 54 | |
| 1 | TERMINAL BLOCK | 55 | |
| 1 | TERMINAL BLOCK | 56 | |
| 1 | TERMINAL BLOCK | 57 | |
| 1 | TERMINAL BLOCK | 58 | |
| 1 | TERMINAL BLOCK | 59 | |
| 1 | TERMINAL BLOCK | 60 | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|------|-------------------|----------|----------|
| 11/45 | 1 | POWER SUPPLY H742 | | |

| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES | DATE | BY | CHKD. | DATE | BY |
|---|-------|----|-------|------|----|
| TOLERANCES | 11/45 | | | | |
| DECIMALS | | | | | |
| ANGLES | | | | | |
| FINISH | | | | | |
| PROT. | | | | | |
| DATE | | | | | |
| BY | | | | | |
| DATE | | | | | |
| BY | | | | | |
| DATE | | | | | |
| BY | | | | | |

| MATERIAL | FINISH | SCALE | SHEET | TOTAL SHEETS |
|----------------|--------|-----------|--------|--------------|
| SEE PARTS LIST | | 1/4" = 1" | 1 OF 3 | 3 |

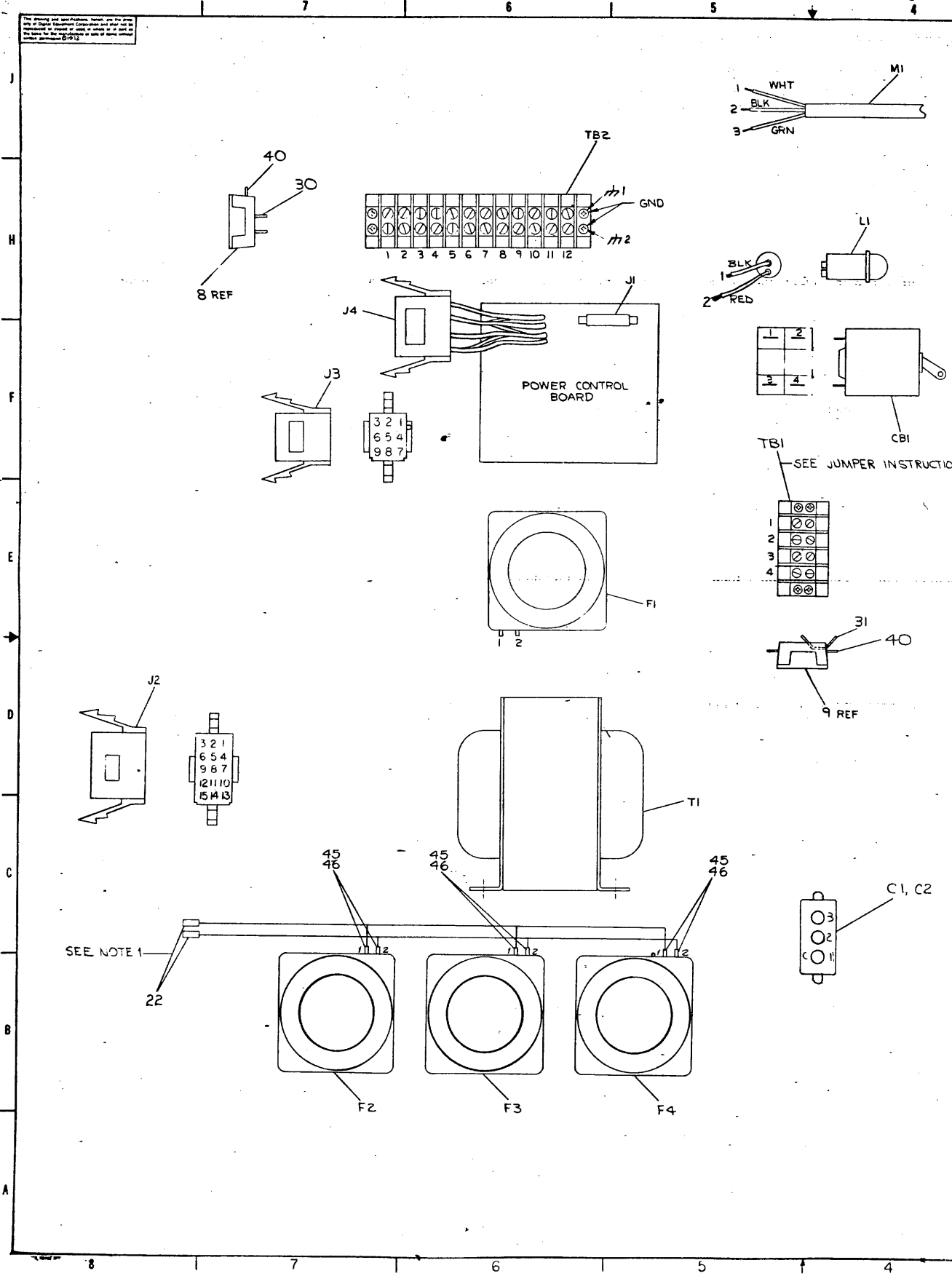
| DATE | BY | CHKD. | DATE | BY |
|-------|----|-------|------|----|
| 11/45 | | | | |

| TITLE | DATE | BY | CHKD. | DATE | BY |
|-------------------|-------|----|-------|------|----|
| POWER SUPPLY H742 | 11/45 | | | | |

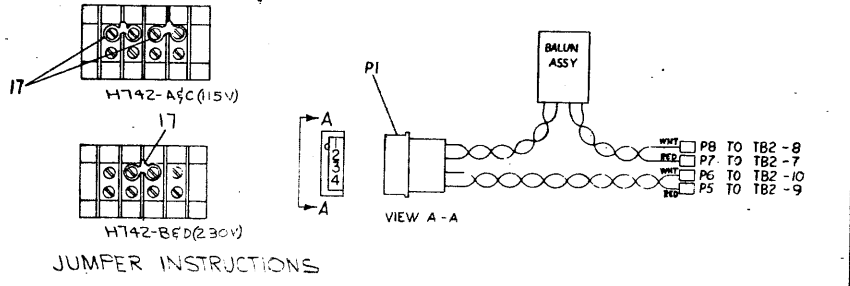
| SIZE/SCALE | NUMBER | REV |
|------------|-----------|-----|
| EUA | H742 -0-0 | U |

EUA H742-0-0 U

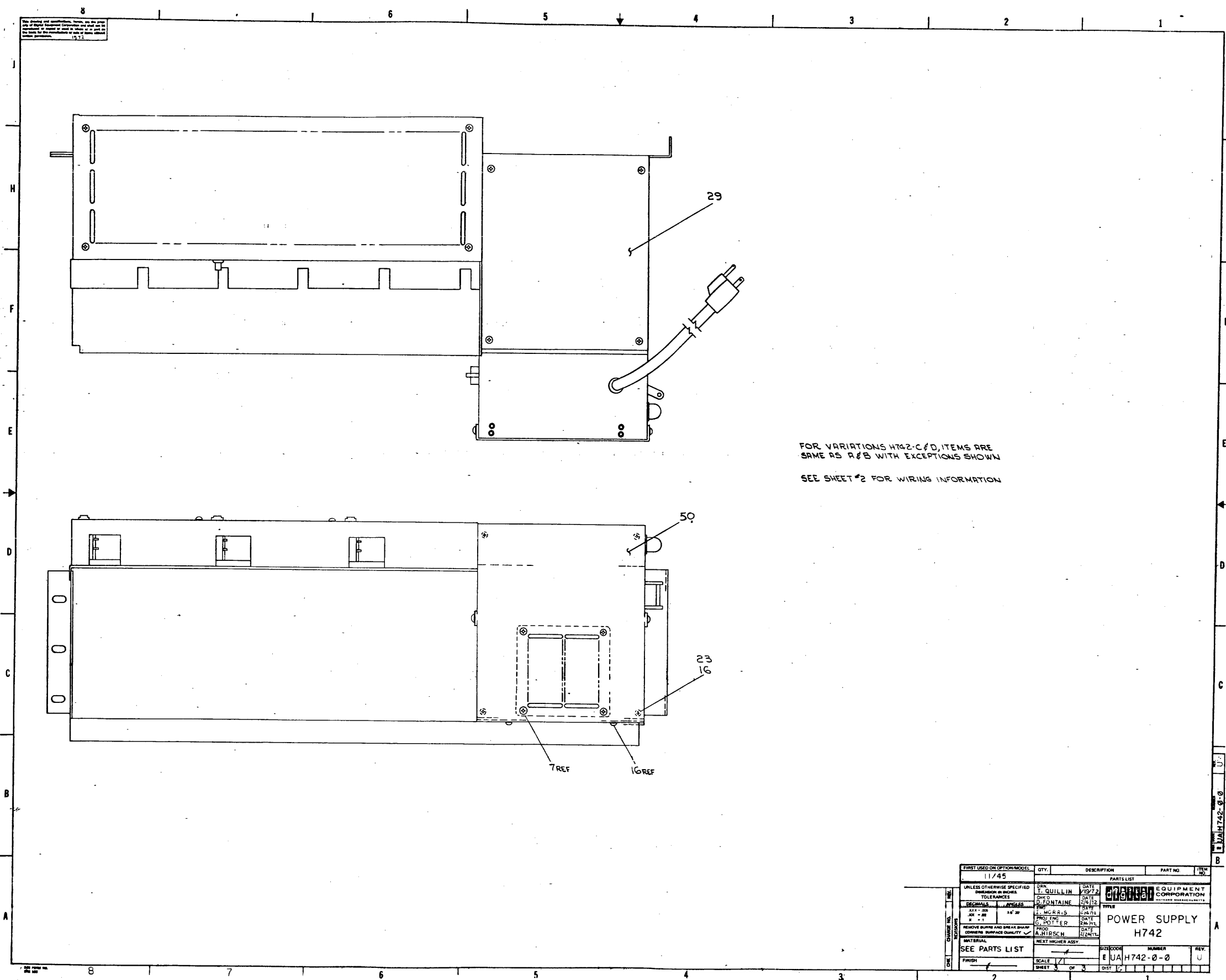
The ground and neutral terminals, and the wires from the power control board, should be connected to the ground terminal of the power control board and the ground terminal of the power control board.



| ITEM NO. | AWG | COLOR | FROM | | TO | | REMARKS |
|----------|-----|-------|-------|--------|--------|--------|--------------|
| | | | CONN | WITH | CONN | WITH | |
| 34 | 18 | WHT | C2-1 | SOLDER | TB1-3 | 35 | SEE NOTE #5 |
| 34 | 18 | WHT | J2-3 | 18,21 | | | |
| 34 | 18 | RED | J2-7 | 18,21 | | | |
| 34 | 18 | RED | C2-3 | SOLDER | TB1-1 | 35 | NOTE #5 |
| 6 | | BLK | T1-5 | | TB2-7 | 35 | |
| | | | T1-6 | | TB2-8 | | |
| | | | T1-7 | | TB2-3 | | |
| | | | T1-8 | | TB2-4 | | |
| | | | T1-9 | | TB2-5 | | |
| | | | T1-10 | | TB2-6 | 35 | |
| | | | T1-11 | | J2-8 | 21,18 | |
| | | | T1-12 | | J2-10 | 21,18 | |
| | | | T1-13 | | J2-9 | 21,18 | |
| | | | T1-14 | | J2-12 | 21,18 | |
| | | | T1-15 | | TB2-9 | 35 | |
| 6 | | BLK | T1-16 | | TB2-10 | 35 | |
| 12 | | BLK | L1-1 | | TB1-1 | 39 | |
| 12 | | RED | L1-2 | | TB1-3 | 39 | |
| 34 | 18 | RED | TB1-2 | 39 | F1-1 | SOLDER | TWISTED PAIR |
| 34 | 18 | WHT | TB1-4 | 39 | F1-2 | SOLDER | |
| 43 | 18 | RED | C2-2 | SOLDER | C2-3 | SOLDER | |
| 43 | 18 | RED | C1-2 | SOLDER | C1-3 | SOLDER | |
| 11 | 16 | WHT | M1-1 | | CB1-3 | 35 | POWER CORD |
| 11 | 16 | BLK | M1-2 | | CB1-4 | 35 | |
| 11 | 16 | GRN | M1-3 | | TB2-11 | 23,38 | |
| 32 | 14 | RED | TB2-3 | 35 | J3-1 | 19,21 | |
| | | | TB2-3 | | J3-3 | | |
| | | | TB2-4 | | J3-2 | | |
| | | | TB2-4 | | J3-4 | | |
| | | | TB2-5 | | J3-5 | | |
| | | | TB2-5 | | J3-7 | | |
| | | | TB2-6 | | J3-6 | | |
| | | | TB2-6 | | J3-8 | 19,21 | |
| 32 | 14 | RED | TB2-7 | 35 | J2-1 | 18,21 | |
| 32 | 14 | RED | TB2-8 | 35 | J2-2 | 18,21 | |
| 6 | | BLK | TB1-3 | 35 | T1-2 | | |
| 6 | | BLK | TB1-1 | 35 | T1-1 | | |
| 6 | | BLK | TB1-4 | 35 | T1-4 | | |
| 6 | | BLK | TB1-2 | 35 | T1-3 | | |
| 34 | 18 | RED | J2-5 | 18,21 | TB1-2 | 35 | SEE NOTE #5 |
| 34 | 18 | RED | C1-3 | SOLDER | | | |
| 34 | 18 | WHT | J2-6 | 18,21 | TB1-4 | 35 | NOTE #5 |
| 34 | 18 | WHT | C1-1 | SOLDER | | | |
| 34 | 18 | RED | F4-1 | 45,46 | F3-1 | 45,46 | TWISTED PAIR |
| 34 | 18 | WHT | F4-2 | 45,46 | F3-2 | 45,46 | TWISTED PAIR |
| 34 | 18 | RED | F3-1 | 45,46 | F2-1 | 45,46 | TWISTED PAIR |
| 34 | 18 | WHT | F3-2 | 45,46 | F2-2 | 45,46 | TWISTED PAIR |
| 34 | 18 | RED | F2-1 | 45,46 | P2-7 | 22 | TWISTED PAIR |
| 34 | 18 | WHT | F2-2 | 45,46 | P2-3 | 22 | TWISTED PAIR |
| 32 | 14 | WHT | CB1-1 | 35 | TB1-4 | 35 | |
| 32 | 14 | RED | CB1-2 | 35 | TB1-1 | 35 | |
| 62 | 14 | GRN | J2-4 | 21 | TB2-11 | 23,38 | |



| FINISH USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|--------|-------------|----------|----------|
| 11/45 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | DATE | | |
| 1/16 | 1/4 | 11/28/72 | | |
| 1/32 | 1/2 | DATE | | |
| 1/64 | 3/4 | 11/28/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| SEE PARTS LIST | | | | |
| NEXT HIGHER ASSY | | | | |
| FINISH | | | | |
| SCALE | | | | |
| SHEET 2 OF 3 | | | | |



FOR VARIATIONS H742-C & D, ITEMS ARE
 SAME AS A & B WITH EXCEPTIONS SHOWN
 SEE SHEET #2 FOR WIRING INFORMATION

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | REV. |
|---|-------------------|-------------|-----------------------|------|
| 11745 | | | | |
| UNLESS OTHERWISE SPECIFIED TOLERANCES ARE IN INCHES | | | | |
| DESIGNED BY | DATE | DATE | EQUIPMENT CORPORATION | |
| T. QUILLIN | 1/8/72 | 1/8/72 | CORP. | |
| CHECKED BY | DATE | DATE | TITLE | |
| D. MONTAINE | 1/8/72 | 1/8/72 | POWER SUPPLY | |
| APPROVED BY | DATE | DATE | H742 | |
| W. R. S. | 1/8/72 | 1/8/72 | H742-0-0 | |
| PROJ. ENG. | DATE | DATE | REV. | |
| G. POTTER | 1/8/72 | 1/8/72 | U | |
| PROD. MGR. | DATE | DATE | SCALE | |
| A. J. FISCH | 1/8/72 | 1/8/72 | 1/1 | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE/CODE | NUMBER | |
| SEE PARTS LIST | | | EUA H742-0-0 | |
| FINISH | SCALE | 1/1 | REV. | |
| | SHEET | 3 | U | |
| | OF | 3 | DIST. | |
| | | | 1 | |

EUA H742-0-0 U

| DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | | | | QUANTITY / VARIATION | | | | | | | | | | | | | |
|---|-----------------------------|---------------------------------------|--|--------------|---------------------------|---------------|-------------------|---------------|--------------------|--|--|--|----------|--|-----------------------|--|--|--|
| PARTS LIST | | | | | H742-A (115V) | H742-B (230V) | H742-C (115V) | H742-D (230V) | | | | | | | | | | |
| MADE BY T. QUILLIN | | CHECKED D. FONTAINE | | SECTION | | | | | | | | | | | | | | |
| DATE 1/19/72 | | DATE 1/26/72 | | 1 | | | | | | | | | | | | | | |
| ENG <i>F. Potter</i> 2/4-72 | | PROD <i>A. Hirsch</i> | | ISSUED SECT. | | | | | | | | | | | | | | |
| DATE | | DATE 2-24-72 | | 1 | | | | | | | | | | | | | | |
| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | | | | | | | | | | | | | | | | |
| 1 | E-IA-5309755-0-0 | CHASSIS | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 2 | D-IA-5309854-0-0 | CONTROL BOX POWER | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 3 | D-MD-5309850-0-0 | POWER CONTROL COVER | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 4 | 1209403-1 | FAN, BOXER | | | | 3 | 3 | 3 | 3 | | | | | | | | | |
| 5 | 5409730-0-0 | POWER CONTROL BOARD | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 6 | 16-10857 | XMFR | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 7 | 1210719 | FAN PEWEE, BOXER | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 8 | 9006916 | JONES STRIP (12 CONN) 540 | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 9 | 9006903 | JONES STRIP (4 CONN) 540 | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 10 | 9008509 | STRAIN RELIEF | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 11 | 1700006-6 | CORD, POWER (115V) | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 12 | 1211263 | LIGHT, PILOT | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 13 | 1210191-3 | CIRCUIT BREAKER 15 AMP | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 14 | 9006025-1 | SCR. PHL PAN HD #6 X 32 X 5/8 LG | | | | 12 | 12 | 12 | 12 | | | | | | | | | |
| 15 | 9006071-3 | SCR. PHL TRUSS HD #10-32 X 3/8 LG | | | | 4 | 4 | 4 | 4 | | | | | | | | | |
| 16 | 9006020-1 | SCR. PHL PAN HD #6-32 X 1/4 LG | | | | 8 | 8 | 14 | 14 | | | | | | | | | |
| 17 | 9009002 | MECHANICAL JUMPER | | | | 2 | 1 | 2 | 1 | | | | | | | | | |
| 18 | 1209350-15 | MATE-N-LOCK 15 PIN (FEMALE) | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 19 | 1209350-09 | MATE-N-LOCK 9 PIN (FEMALE) | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 20 | 1209350-04 | MATE N LOCK 4 PIN (FEMALE) | | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| 21 | 1209379-01 | CONTACTS (FEMALE) | | | | 19 | 19 | 19 | 19 | | | | | | | | | |
| 22 | 1209378-01 | CONTACTS (MALE) | | | | 6 | 6 | 16 | 16 | | | | | | | | | |
| TITLE H742, POWER CONTROL | | | | | ASSY NO. E-UA-H742-0-0 | | SIZE CODE A PL | | NUMBER H742-0-0 | | | | REV U | | ECO NO. H742-0002R | | | |
| | | | | | SHEET 1 OF 4 | | DIST. G | | | | | | | | | | | |

| DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | | | | QUANTITY / VARIATION | | | | | | | | | | | | | |
|---|---------------------------|---|--|--------------|---------------------------|---------------|-------------------|---------------|--------------------|---|--|--|----------|--|---------|--|--|--|
| PARTS LIST | | | | | H742-A (115V) | H742-B (230V) | H742-C (115V) | H742-D (230V) | | | | | | | | | | |
| MADE BY T. QUILLIN | | CHECKED D. FONTAINE | | SECTION | | | | | | | | | | | | | | |
| DATE 1-19-72 | | DATE 1-26-72 | | 1 | | | | | | | | | | | | | | |
| ENG <i>S. Potter</i> | | PROD <i>A. Hirsch</i> | | ISSUED SECT. | | | | | | | | | | | | | | |
| DATE 2-12-72 | | DATE 2-24-72 | | 1 | | | | | | | | | | | | | | |
| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | | | | | | | | | | | | | | | | |
| 23 | 9007113 | DOUBLE UPRIGHT 90 | | | | 8 | 8 | 8 | 8 | | | | | | | | | |
| 24 | 9007269 | DOUBLE 45° | | | | 4 | 4 | 4 | 4 | | | | | | | | | |
| 25 | 9107370-22 | #14 AWG 19 STRAND PVC. INS. (RED) | | | | A/RA | RA | RA | RA | P | | | | | | | | |
| 26 | 9009165 | FAN MTG CLIP | | | | 12 | 12 | 12 | 12 | | | | | | | | | |
| 27 | 9107360-22 | #18 AWG 19 STRAND PVC. INS. (RED/WHT) TWP | | | | A/RA | RA | RA | RA | P | | | | | | | | |
| 28 | 9007912 | FASTON TAB (.250 SERIES) BLU | | | | 32 | 32 | 32 | 32 | | | | | | | | | |
| 29 | 16-10180 | CAPACITOR 2 X .1 uf @ 1000V | | | | 2 | 2 | 2 | 2 | | | | | | | | | |
| 30 | 9007920 | FASTON TAB (.250 SERIES) YEL | | | | 4 | 4 | 4 | 4 | | | | | | | | | |
| 31 | 9007927 | RING TERMINAL BLU | | | | 2 | 2 | 2 | 2 | | | | | | | | | |
| 32 | 9007912 | FASTON TAB (.250 SERIES) RED | | | | 8 | 8 | 8 | 8 | | | | | | | | | |
| 33 | 9007412 | SINGLE FLAT | | | | 16 | 16 | 16 | 16 | | | | | | | | | |
| 34 | D-IA-5309854-2 | POWER CONTROL BOX | | | | | | | | | | | | | | | | |
| 35 | 1700016-6 | CORD POWER (230V) | | | | - | 1 | - | - | | | | | | | | | |
| 36 | 9107360-22 | #18 AWG 19 STRAND PVC. INS. (RED) | | | | A/RA | RA | RA | RA | R | | | | | | | | |
| 37 | 9007793-1 | SCR PHL PAN HD #6-32 X 9/16 LG | | | | 8 | 8 | 8 | 8 | | | | | | | | | |
| TITLE H742 POWER CONTROL | | | | | ASSY NO. E-UA-H742-0-0 | | SIZE CODE A PL | | NUMBER H742-0-0 | | | | REV U | | ECO NO. | | | |
| | | | | | SHEET 2 OF 4 | | DIST. G | | | | | | | | | | | |

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

| | | |
|--------------------|---------------------|--------------|
| MADE BY T. Quillin | CHECKED D. Fontaine | SECTION |
| DATE 1/19/72 | DATE 1/26/72 | 1 |
| ENG G. POTTER | PROD A. HIRSCH | ISSUED SECT. |
| DATE 2-14-72 | DATE 2-24-72 | 1 |

QUANTITY / VARIATION

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | H742-A (115V) | H742-B (230V) | H742-C (115V) | H742-D (230V) | | | | | | | | | | | |
|---------------|-----------------------------|---|---------------|---------------|---------------|---------------|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | |
| 45 | 12-10820-1 | CONNECTOR, HOUSING | 6 | 6 | 6 | 6 | | | | | | | | | | | |
| 46 | 12-10820-2 | CONNECTOR, PIN | 6 | 6 | 6 | 6 | | | | | | | | | | | |
| 47 | 9006022-3 | SCR, PHL, TRUSS HD. #6-32 X 3/8 LG. | 4 | 4 | 4 | 4 | | | | | | | | | | | |
| 48 | 9006558 | NUT, HEX #6-32 X 5/16 X 1/8 | 3 | 3 | 3 | 3 | | | | | | | | | | | |
| 49 | 9009228 | SCR PHL PAN HD, 10-32 X 3/8 SEMS | 10 | 10 | 10 | 10 | | | | | | | | | | | |
| 50 | C-MD-7409702-0-0 | COVER, POWER CONTROL | - | - | - | - | | | | | | | | | | | |
| 51 | D-IA-5309854-3-0 | POWER CONTROL BOX | - | - | - | - | | | | | | | | | | | |
| 52 | D-IA-5309854-4-0 | " " " " " | - | - | - | - | | | | | | | | | | | |
| 53 | 9006796 | SPACER #6*32X 3/16 LG SST | - | - | 4 | 4 | | | | | | | | | | | |
| 54 | A-PI-3700073-0-0 | H742 POWER SUPPLY INTERPLANT PACKAGE | 1 | 1 | 1 | 1 | | | | | | | | | | | |
| * 55 | C-IA-7009737-0-0 | MINI BOXER FAN SCREEN | 1 | 1 | 1 | 1 | | | | | | | | | | | |
| 56 | 9006024-1 | SCR, PHL, PAN HD, #6-32 X 1/2 LG | 12 | 12 | 12 | 12 | | | | | | | | | | | |
| 57 | A-DC-5310459-0-0 | DECAL, H742A | 1 | - | - | - | | | | | | | | | | | |
| 58 | A-DC-5310460-0-0 | DECAL, H742B | - | 1 | - | - | | | | | | | | | | | |
| 59 | A-DC-5310461-0-0 | DECAL, H742C | - | - | 1 | - | | | | | | | | | | | |
| 60 | A-DC-5310462-0-0 | DECAL, H742D | - | - | - | 1 | | | | | | | | | | | |
| 61 | 1611444 | BALUN ASSEMBLY | 1 | 1 | 1 | 1 | | | | | | | | | | | |
| 62 | 9107370-55 | #14 AWG IPVC STRANDED, GREEN | A/R | A/R | A/R | A/R | | | | | | | | | | | |
| 63 | 9006633 | LOCK WASHER, #6 INT. TOOTH | 8 | 8 | 8 | 8 | | | | | | | | | | | |
| * 64 | 9007993-1 | SCR. PHL. PAN HD. 6-32 X 9/16 LG | 12 | 12 | 12 | 12 | | | | | | | | | | | |
| * 65 | 9008208 | FAN MTG. CLIP | 12 | 12 | 12 | 12 | | | | | | | | | | | |
| | | * SEE NOTE 4 ON E-UA-H742-0-0 | | | | | | | | | | | | | | | |

| | | | | | | |
|--------------------|---------------|------|------|----------|------|--------|
| TITLE | ASSY NO. | SIZE | CODE | NUMBER | REV. | ECONO. |
| H742 POWER CONTROL | E-UA-H742-0-0 | A | PL | H742-0-0 | U | |
| | SHEET 3 OF 4 | | | | | |

DEC FORM DEC 16- (325)-1031-N870

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

| | | |
|--------------------|---------------------|--------------|
| MADE BY T. QUILLIN | CHECKED D. FONTAINE | SECTION |
| DATE 1-19-72 | DATE 1-26-72 | 1 |
| ENG G. POTTER | PROD A. HIRSCH | ISSUED SECT. |
| DATE 2-14-72 | DATE 2-24-72 | 1 |

QUANTITY / VARIATION

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | H742-A (115V) | H742-B (230V) | H742-C (115V) | H742-D (230V) | | | | | | | | | | | |
|----------|--------------------|------------------------|---------------|---------------|---------------|---------------|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | |
| 66 | A-PI-3700073-0-0 | PACKAGING INSTRUCTIONS | 1 | 1 | 1 | 1 | | | | | | | | | | | |
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|--------------------|---------------|------|------|----------|------|--------|
| TITLE | ASSY NO. | SIZE | CODE | NUMBER | REV. | ECONO. |
| H742 POWER CONTROL | E-UA-H742-0-0 | A | PL | H742-0-0 | U | |
| | SHEET 4 OF 4 | | | | | |

DEC FORM DEC 16- (325)-1031-N870

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

DRAWING DIRECTORY
CIRCUIT SCHEMATIC
UNIT ASS'Y

SEQUENCE TB-DD-H744-β
D-CS-H744-β-1
E-UF-H744-0-0

SEQUENCE
MFG. SET
TEST PROCEDURE A-SP-H744-β-3
MFG. SPE A-SP-H744-β-8
PACKAGING INSTRUCTIONS A-PI-3700074-0-0

| UNIT VARIATIONS | | PRINT SET TYPE | | | |
|-----------------|---------------|----------------|--|--|--|
| VARIATION | TITLE | H744-1 | | | |
| H744 | +5V REGULATOR | X | | | |
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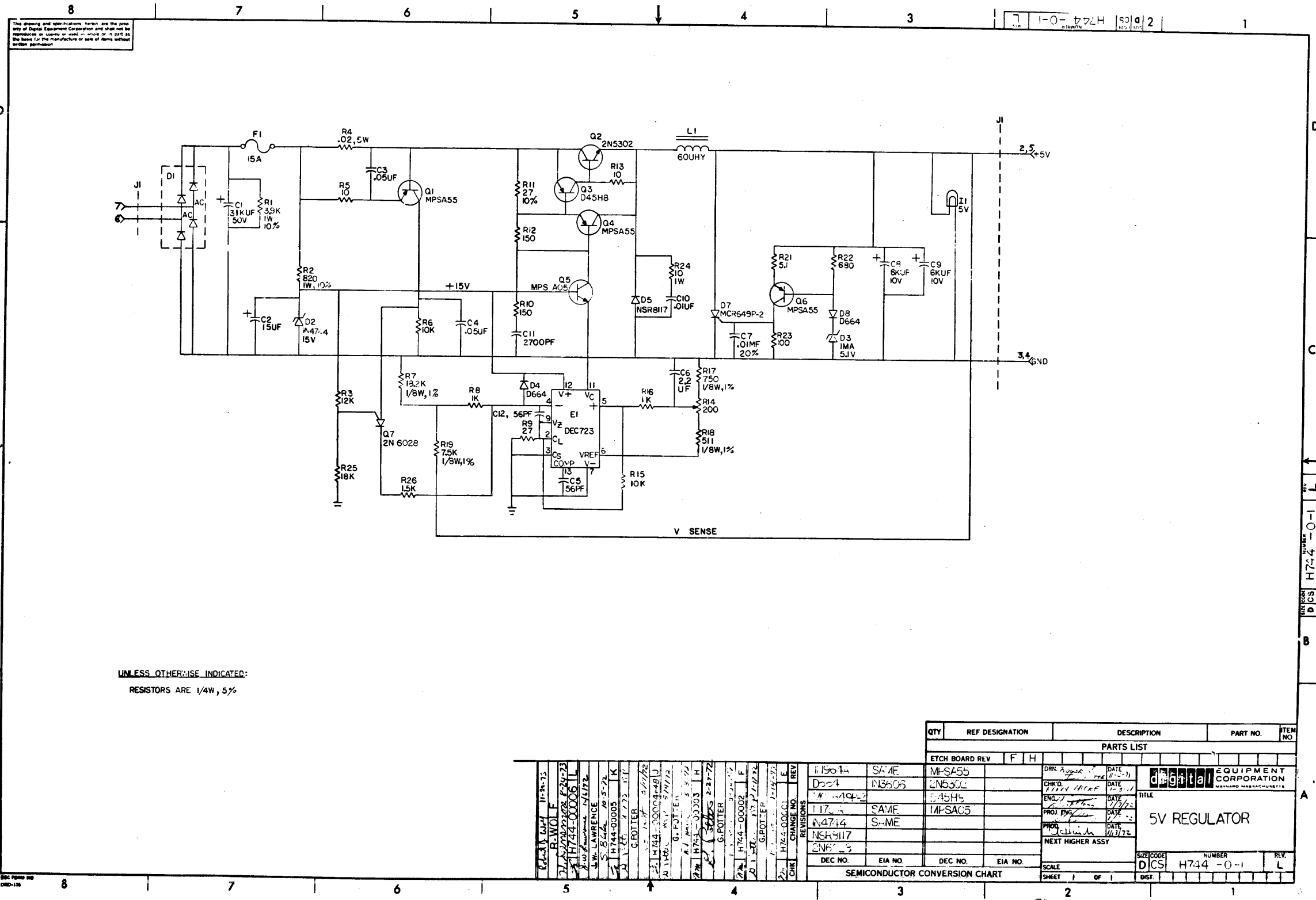
| DATE | CHG. NO. | REV |
|------------------|----------|-----|
| | 0005 | A |
| S. Blake 10-6-72 | | |
| J.W. LAWRENCE | | |
| | 0007 | B |
| R. WOLF | | |
| | | |
| | | |

| | | | | | | | | |
|----------------------|-------|--------------------------|---------------------|----------------------------|--------------|------------------------|--------|----------|
| USED ON OPTION/MODEL | 11/45 | DRN. D. FONTAINE | DATE 2-4-72 | TITLE +5V REGULATOR | SIZE B DD | CODE H744- <u>β</u> | NUMBER | REV B |
| | | CHK'D. D. FONTAINE | DATE 2-4-72 | | | | | |
| | | PROJ ENG. [Signature] | DATE 2-25-72 | | | | | |
| | | PROD. [Signature] | DATE [Signature] | | | | | |
| FIELD SERV. | | | DATE | | | | | |
| SHEET 1 OF 2 | | DIST | | | | | | |

| CUSTOMER PRINT SET | | | | ELECTRICAL | | | | | CUSTOMER PRINT SET | | | | MECHANICAL | | | | | | | |
|--------------------|--|---|--|------------|---------------|-----|-----------|-------------------|--------------------|--------|--|--|------------|----------|------------------|------------------|-----------|------------------|-----------------------|------|
| H744-1 | | | | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. | H744-1 | | | | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. | |
| X | | | | 1 | D-CS-H744-0-1 | # | 1 | CIRCUIT SCHEMATIC | H744 | X | | | | 1 | E-08-H744-0-0 | K | 1 | UNIT ASSY | H744 | |
| | | X | | | A-SP-H744-0-3 | | | TEST PROCEDURE | H744 | | | | | | D-PS-1210737-0-0 | | 1 | HEAT SINK | H744 | |
| | | X | | | A-SP-H744-0-8 | | | MFG. SPEC | H744 | | | | | | D-1A-5309756-0-0 | | 1 | REGULATOR BRK'IT | H744 | |
| | | | | | | | | | | | | | | | C-1A-5309761-0-0 | | 1 | 2 - 5 CAP HOLDER | H744 | |
| | | | | | | | | | | | | | | | C-1A-5309760-0-0 | | 1 | COMPONENT COVER | H744 | |
| | | | | | | | | | | | | | | | C-MD-5309759-0-0 | | 1 | CAPACITOR STRAP | H744 | |
| | | | | | | | | | | | | | | | 2 | A-PI-3700074-0-0 | - | 2 | PACKAGING INSTRUCTION | H744 |
| | | | | | | | | | | | | | | | | A-PS-9905211-0-0 | - | 2 | OUTER CARTON | |
| | | | | | | | | | | | | | | | | | | 2 | INNER PACKAGE | |

| | | | |
|---------------|-----------|--------|-----|
| TITLE | SIZE CODE | NUMBER | REV |
| +5V REGULATOR | B DD | H744-0 | B |

SHEET 2 OF 2



UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|------------|-----------------|-------------|----------|----------|
| PARTS LIST | | | | |
| 1 | ETCH BOARD REV | F H | | |
| 1 | D004 | SA-ME | MPSA55 | |
| 1 | M1744-00002 | SA-ME | 2N5302 | |
| 1 | M1744-00001 | SA-ME | 2N5302 | |
| 1 | M1744-00003 | SA-ME | 2N5302 | |
| 1 | M1744-00004 | SA-ME | 2N5302 | |
| 1 | M1744-00005 | SA-ME | 2N5302 | |
| 1 | M1744-00006 | SA-ME | 2N5302 | |
| 1 | M1744-00007 | SA-ME | 2N5302 | |
| 1 | M1744-00008 | SA-ME | 2N5302 | |
| 1 | M1744-00009 | SA-ME | 2N5302 | |
| 1 | M1744-00010 | SA-ME | 2N5302 | |
| 1 | M1744-00011 | SA-ME | 2N5302 | |
| 1 | M1744-00012 | SA-ME | 2N5302 | |
| 1 | M1744-00013 | SA-ME | 2N5302 | |
| 1 | M1744-00014 | SA-ME | 2N5302 | |
| 1 | M1744-00015 | SA-ME | 2N5302 | |
| 1 | M1744-00016 | SA-ME | 2N5302 | |
| 1 | M1744-00017 | SA-ME | 2N5302 | |
| 1 | M1744-00018 | SA-ME | 2N5302 | |
| 1 | M1744-00019 | SA-ME | 2N5302 | |
| 1 | M1744-00020 | SA-ME | 2N5302 | |
| 1 | M1744-00021 | SA-ME | 2N5302 | |
| 1 | M1744-00022 | SA-ME | 2N5302 | |
| 1 | M1744-00023 | SA-ME | 2N5302 | |
| 1 | M1744-00024 | SA-ME | 2N5302 | |
| 1 | M1744-00025 | SA-ME | 2N5302 | |
| 1 | M1744-00026 | SA-ME | 2N5302 | |
| 1 | M1744-00027 | SA-ME | 2N5302 | |
| 1 | M1744-00028 | SA-ME | 2N5302 | |
| 1 | M1744-00029 | SA-ME | 2N5302 | |
| 1 | M1744-00030 | SA-ME | 2N5302 | |
| 1 | M1744-00031 | SA-ME | 2N5302 | |
| 1 | M1744-00032 | SA-ME | 2N5302 | |
| 1 | M1744-00033 | SA-ME | 2N5302 | |
| 1 | M1744-00034 | SA-ME | 2N5302 | |
| 1 | M1744-00035 | SA-ME | 2N5302 | |
| 1 | M1744-00036 | SA-ME | 2N5302 | |
| 1 | M1744-00037 | SA-ME | 2N5302 | |
| 1 | M1744-00038 | SA-ME | 2N5302 | |
| 1 | M1744-00039 | SA-ME | 2N5302 | |
| 1 | M1744-00040 | SA-ME | 2N5302 | |
| 1 | M1744-00041 | SA-ME | 2N5302 | |
| 1 | M1744-00042 | SA-ME | 2N5302 | |
| 1 | M1744-00043 | SA-ME | 2N5302 | |
| 1 | M1744-00044 | SA-ME | 2N5302 | |
| 1 | M1744-00045 | SA-ME | 2N5302 | |
| 1 | M1744-00046 | SA-ME | 2N5302 | |
| 1 | M1744-00047 | SA-ME | 2N5302 | |
| 1 | M1744-00048 | SA-ME | 2N5302 | |
| 1 | M1744-00049 | SA-ME | 2N5302 | |
| 1 | M1744-00050 | SA-ME | 2N5302 | |

| | |
|------------------|--------------|
| DRG. DATE | 11-20-73 |
| CHKD. DATE | 11-20-73 |
| ENGR. DATE | 11-20-73 |
| PROT. ENG. DATE | 11-20-73 |
| PROD. DATE | 11-20-73 |
| NEXT HIGHER ASSY | |
| SIZE CODE | DCS |
| NUMBER | H744 - 0 - 1 |
| REV. | L |

SEMICONDUCTOR CONVERSION CHART

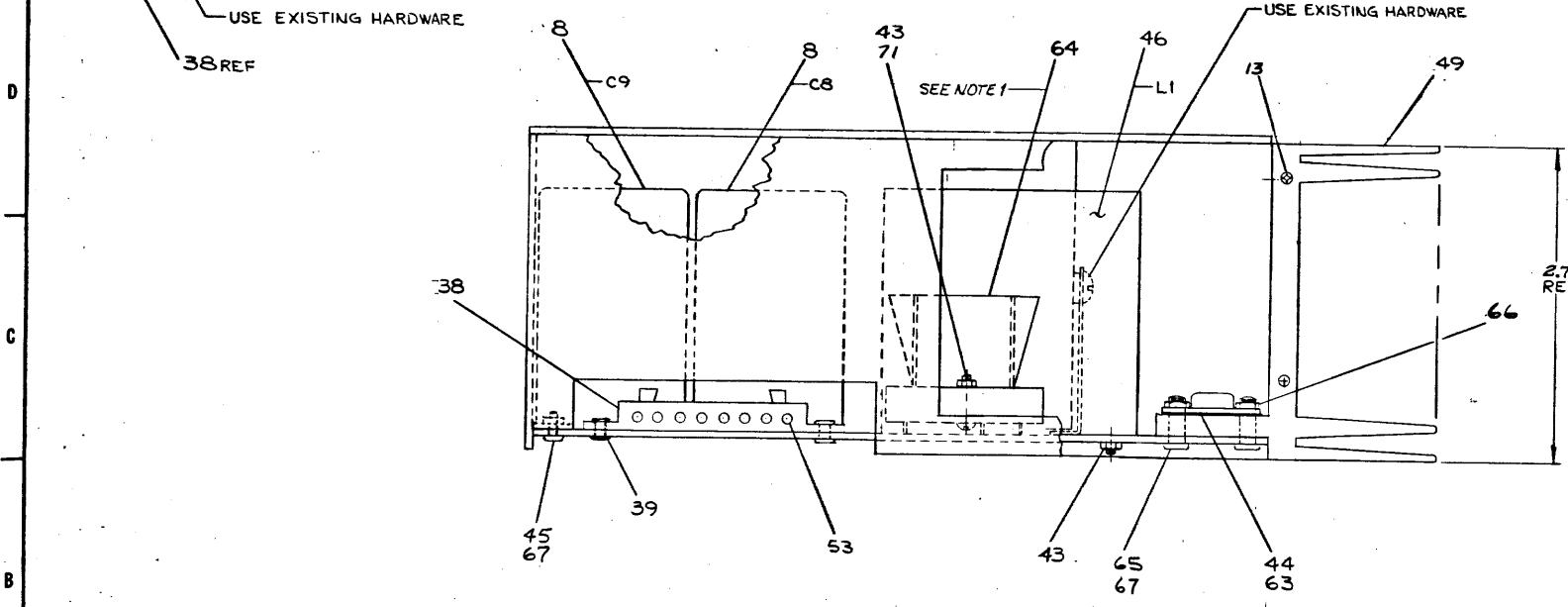
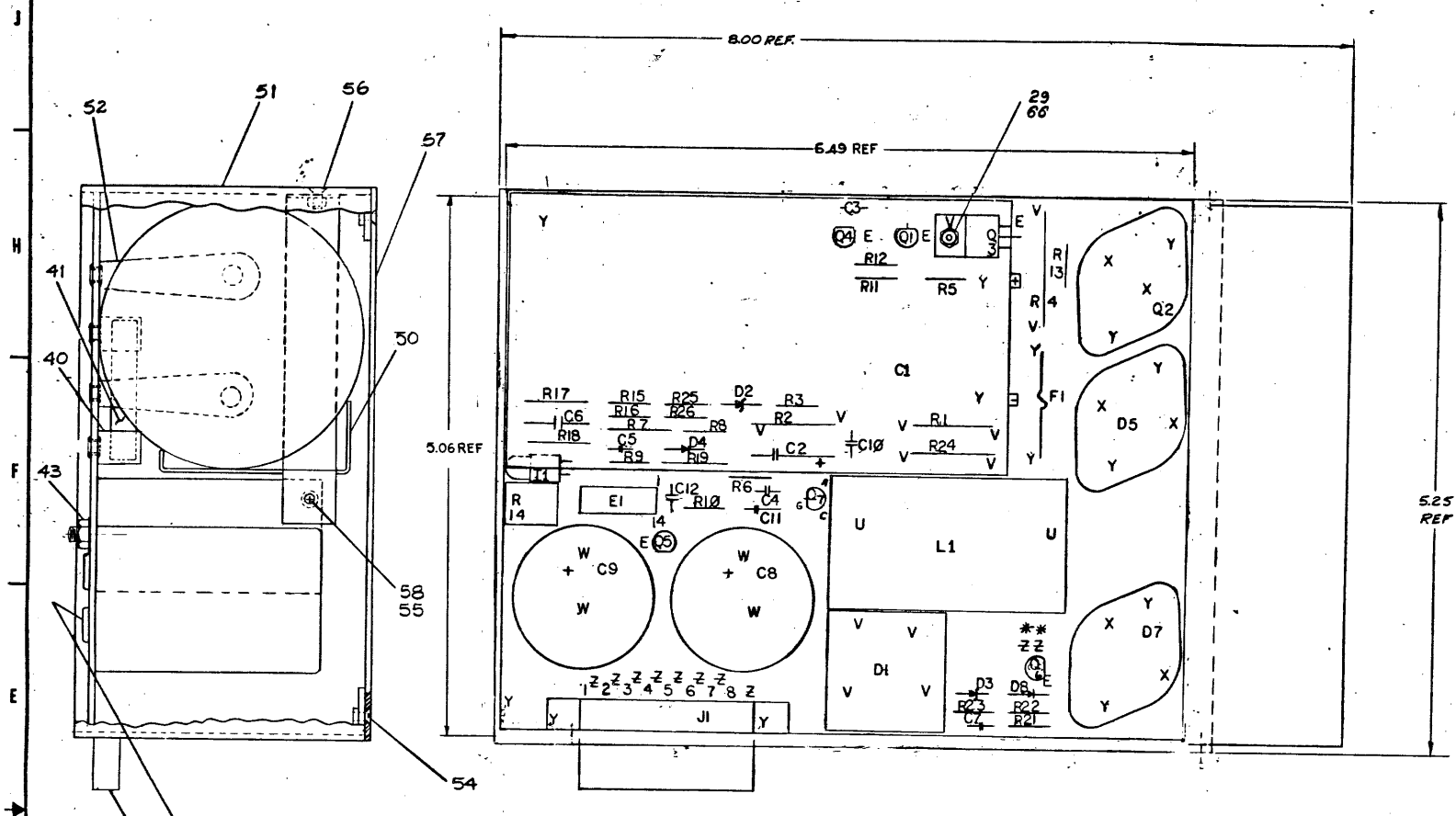
SCALE SHEET 1 OF 1

DRAWN BY: J. L. ...

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1-0-722H 10/1/73

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| IC TYPE | QND | QSV | ITEM NO | AWG | FROM PT | TO PT |
|---------|-----|-----|---------|-----|---------|-------|
| 7418 | 7 | 12 | | | | |

| IC PIN LOCATIONS | JUMPER LIST |
|------------------|-------------|
| | |

| | | | |
|---|-------------------------------|-----------------|---------|
| 1 | SCR, PHL PAN HD #6-32, 5/8 LG | 9006025-1 | 71 |
| 1 | PACKING INSTRUCTIONS | ARI-3700074-0-0 | 70 |
| 1 | R22 | RES 680 1/4W 5% | 1301424 |

| REV | DATE | DESCRIPTION |
|-----|----------|---|
| 1 | 11-28-63 | ISSUED FOR PRODUCTION |
| 2 | 12-10-63 | REVISED TO ADD PARTS LIST |
| 3 | 1-10-64 | REVISED TO ADD CIRCUIT BOARD REV |
| 4 | 1-10-64 | REVISED TO ADD SEMICONDUCTOR CONVERSION CHART |

| | | | |
|--|---------------------|-------------------------------------|-----------------|
| FIRST USED ON OPTION D-UA-H742A-0-0 | ETCH BOARD REV H | PARTS LIST D664 IN3006 IN4744 | 5V REGULATOR |
| DEC NO. EIA NO. | DEC NO. EIA NO. | SCALE 1:1 | SHEET 1 OF 1 |

NOTES:
 1. APPLY ITEM #63 (COMPOUND) BETWEEN TRANSISTOR (Q2), DIODES (D5, D7) AND ITEM #44 (WASHER) ALSO BETWEEN ITEM #44 (WASHER) AND HEAT SINK (ITEM #49). ALSO APPLY ITEM #63 (COMPOUND) BETWEEN ITEM #9 (DIODE BRIDGE) AND ITEM #64 (HEAT SINK BRIDGE).

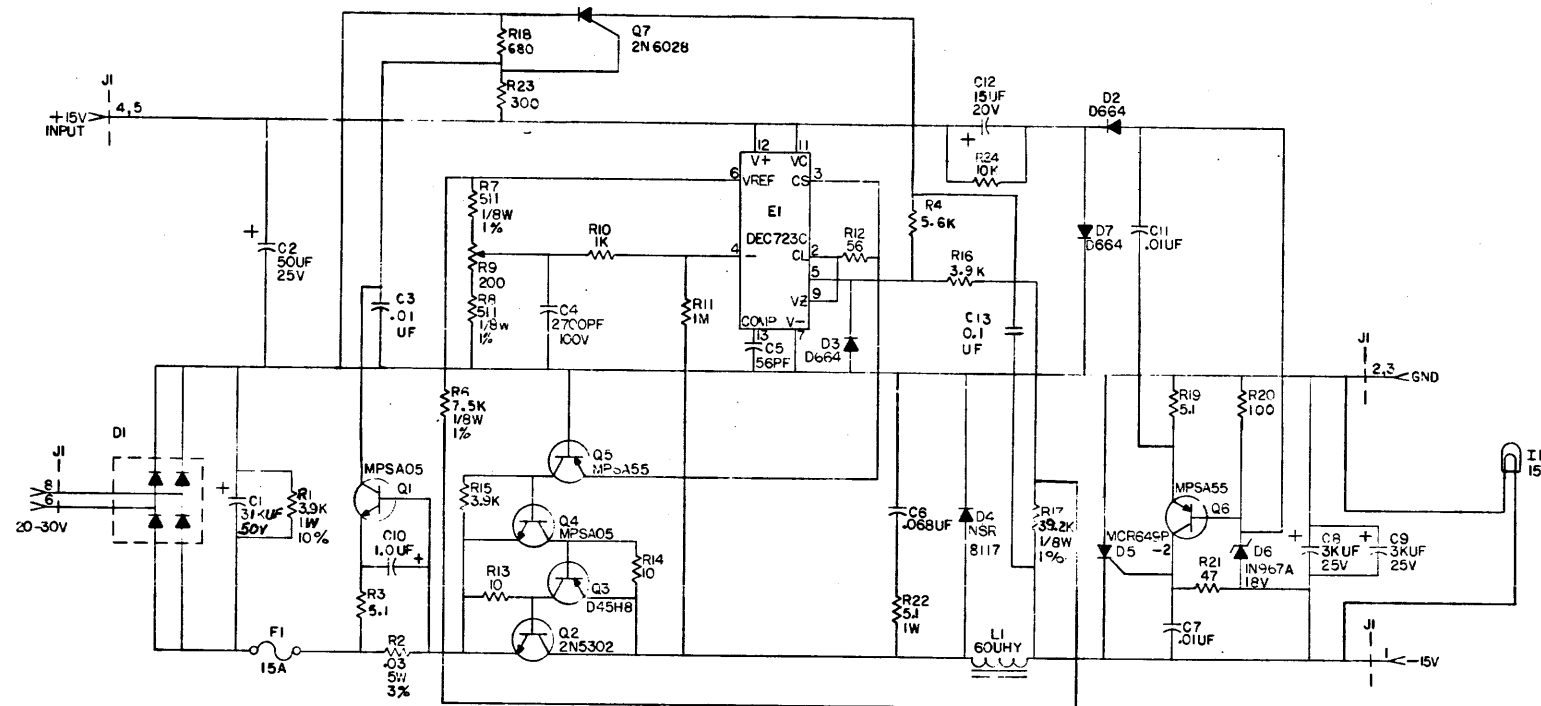
| | | | | |
|---|----|----------------------------------|------------------------------|-------------------|
| 1 | Z1 | 5 VOLT LAMP | 12-09219-1 | 68 |
| 1 | 8 | L WASHER #4 | 9006632 | 67 |
| 1 | 7 | NUT KEPS #4-40 | 9006557 | 66 |
| 1 | 6 | SCR PHL PAN HD #4-40 3/16 LG | 9006033 | 65 |
| 1 | 5 | HEAT SINK BRIDGE | 1210907 | 64 |
| 1 | 4 | COVER | CMD-5309760-0 | 63 |
| 1 | 3 | COMPUND THERMAL JOINT | 8008268 | 62 |
| 1 | 2 | RESISTOR 1.5K 1/4W 5% | 1300381 | 61 |
| 1 | 1 | RESISTOR 7.5K 1/8W 1% | 1305322 | 60 |
| 1 | 0 | RESISTOR 12K 1/4W 5% | 1300488 | 59 |
| 1 | Q7 | TRANSISTOR, UNIJUNCTION 2N2822 | 1510877 | 58 |
| 1 | 1 | SCR, PHL PAN HD #6-32 X 1/4 LG | 9006020-1 | 57 |
| 1 | 1 | COVER | CMD-5309760-0 | 56 |
| 1 | 1 | SCR, PHL FLT HD #6-32 X 1/4 LG | 9006020-2 | 55 |
| 1 | 1 | WASHER, LOCK #6 | 9007649 | 54 |
| 1 | 4 | SCR, PHL FLT HD #4-40 X 3/16 LG | 9006010-2 | 53 |
| 1 | 8 | CONTACT FEMALE | 1209456 | 52 |
| 2 | 2 | STRAP, CAPACITOR | C-MD-5309759-0 | 51 |
| 1 | 1 | BRACKET, REGULATOR | D-1A-5309756-0 | 50 |
| 1 | 1 | HOLDER, CAPACITOR 2.5 | C-1A-5309761-0 | 49 |
| 1 | 1 | HEAT SINK REGULATOR | D-PS-120737-0-0 | 48 |
| 1 | 1 | CAP 56 PF | 1000012 | 47 |
| 1 | 1 | R24 | RESISTOR 10 1W | 1300171 |
| 1 | 1 | L1 | REACTOR 60 MHY MMC4347 | 1610850 |
| 2 | 3 | SCR, PHL PAN HD #4-40, 1/4 LG | 9006009-1 | 46 |
| 3 | 3 | WASHER, INSULATOR | 9006721 | 45 |
| 3 | 3 | NUT KEPS #6-32 | 9006165 | 44 |
| 1 | 1 | F1 | FUSE 15 AMP | 9007226 |
| 2 | 2 | FUSE CLIP | 9007203 | 43 |
| 6 | 6 | EYELET 6S-6-7 | 9006732 | 39 |
| 1 | 1 | U1 | MATE-IN-LOCK CONN, 8 PIN | 1209340 |
| 1 | 1 | E1 | INTEGRATED CIRCUIT DEC 723C | 1910415 |
| 1 | 1 | Q3 | TRANSISTOR A05 | 1510705 |
| 1 | 1 | Q3 | TRANSISTOR D45H6 | 1510708 |
| 3 | 3 | Q1, Q2, Q4 | TRANSISTOR MPS4550MOT | 1510706 |
| 1 | 1 | Q2 | TRANSISTOR 2N302 | 1510196 |
| 1 | 1 | R14 | RES, VARIABLE 200 | 1310852 |
| 1 | 1 | R21 | RES 5.1 1/4W 5% | 1309422 |
| 1 | 1 | R23 | RES, 100 1/4W 5% | 1300229 |
| 1 | 1 | 1 | SCR, PHL #4-40 X 3/16 LG | 9006010 |
| 1 | 1 | R11 | RES 27 1/4W 10% | 1301420 |
| 1 | 1 | R17 | RES 750 1/8W 1% | 1302955 |
| 1 | 1 | R9 | RES 27 1/4W 5% | 1301522 |
| 1 | 1 | R7 | RES 18.2K 1/8W 1% | 1309412 |
| 2 | 2 | R8, R16 | RES 1K 1/4W 5% | 1300305 |
| 1 | 1 | R18 | RES 511 1/8W 1% | 1302411 |
| 1 | 1 | R25 | RES 18K 1/4W 5% | 1302465 |
| 2 | 2 | R6, R15 | RES 10K 1/4W 5% | 1300479 |
| 1 | 1 | R4 | RES .02 5W 3% | 1310 876 |
| 1 | 1 | R2 | RES 820 1W 10% | 1300358 |
| 1 | 1 | R1 | RES 3.9K 1W 10% | 1302927 |
| 2 | 2 | R5, R13 | RES 10 1/4W 5% | 1301317 |
| 2 | 2 | R12, R10 | RES 150 1/4W 5% | 1300250 |
| 1 | 1 | D3 | DIODE ZENER 1 MA 51V | 1110925 |
| 1 | 1 | D7 | SCR MCR 649P-2 | 1109465 |
| 4 | 4 | SCR, PHL #4 X 3/16 LG, SELF-PROT | 9003942 | 13 |
| 1 | 1 | D5 | DIODE PWR NSR 5117 | 1110715 |
| 2 | 2 | D4, D8 | DIODE PWR D664 | 1100114 |
| 1 | 1 | D2 | DIODE ZENER IN4744 | 1105648 |
| 1 | 1 | D1 | DIODE BRIDGE | 110714 |
| 2 | 2 | C8, C9 | CAP 6K4UF 10V | 100704 |
| 1 | 1 | C1 | CAP 31 KUF 50V | 1010858 |
| 2 | 2 | C4, C3 | CAP, 0.01UF 25V | K01774 |
| 1 | 1 | C2 | CAP 15 UF 20V 10% | 104812 |
| 1 | 1 | C11 | CAP 2700PF 100V 5% DM | 1001637 |
| 2 | 2 | C7, C10 | CAP .01UF 100V 20% DISC | 1001610 |
| 1 | 1 | C6 | CAP 2.2UF, 20V, 10% | 1002427 |
| 1 | 1 | 1 | ETCHED CIRCUIT BOARD | 5009725 |
| 1 | 1 | 1 | ASSY/DRILLING HOLE LAYOUT | D-AH-H744-0-5 |
| 1 | 1 | 1 | X-Y COORDINATE HOLE LOCATION | D-CO-H744-0-4 REF |
| 1 | 1 | 1 | MODULE ECO HISTORY | D-MH-H744-0-6 REF |
| 1 | 1 | 1 | CIRCUIT SCHEMATIC | D-CE-H744-0-1 REF |

D-VA-H744-0-0

| CUSTOMER PRINT SET | | | | | ELECTRICAL | | | | | CUSTOMER PRINT SET | | | | | MECHANICAL | | | | | | | |
|--------------------|--|--|--|--|------------|-----------------|-----|-----------|-------------------|--------------------|--------|--|--|--|------------|----------|------------------|------------------|-----------|-----------------|------------------------|------|
| H745-1 | | | | | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. | H745-1 | | | | | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. | |
| X | | | | | 1 | D-CS-H745-0-1 | # | 1 | CIRCUIT SCHEMATIC | H745 | X | | | | | 1 | E-UA-H745-0-0 | * | 1 | UNIT ASS'Y | H745 | |
| | | | | | | A-SP-11/45-TA-2 | | | TEST PROCEDURE | H745 | | | | | | | D-PS-1210737-0-0 | | 1 | HEAT SINK | H745 | |
| | | | | | | A-SP-H745-0-8 | | | MFG SPEC | H745 | | | | | | | D-1A-5309756-0-0 | | 1 | REGULATOR BRKT | H745 | |
| | | | | | | | | | | | | | | | | | D-1A-5309761-0-0 | | 1 | 2 - 5 CAP BRKT | H745 | |
| | | | | | | | | | | | | | | | | | C-1A-5309760-0-0 | | 1 | COMPONENT COVER | H745 | |
| | | | | | | | | | | | | | | | | | C-MD-5309759-0-0 | | 1 | CAPACITOR STRAP | H745 | |
| | | | | | | | | | | | | | | | | | 2 | A-PI-3700074-0-0 | - | 2 | PACKAGING INSTRUCTIONS | H745 |
| | | | | | | | | | | | | | | | | | | A-PS-9905211-0-0 | - | 2 | OUTER CARTON | H745 |
| | | | | | | | | | | | | | | | | | | A-PS-9905212-0-0 | - | 2 | INNER PACKAGE | H745 |

TITLE: -15V REGULATOR
 SHEET 2 OF 2
 SIZE CODE: B DD
 NUMBER: H745-0
 REV: E

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UNLESS OTHERWISE INDICATED:
RESISTORS = 1/4W, 5%

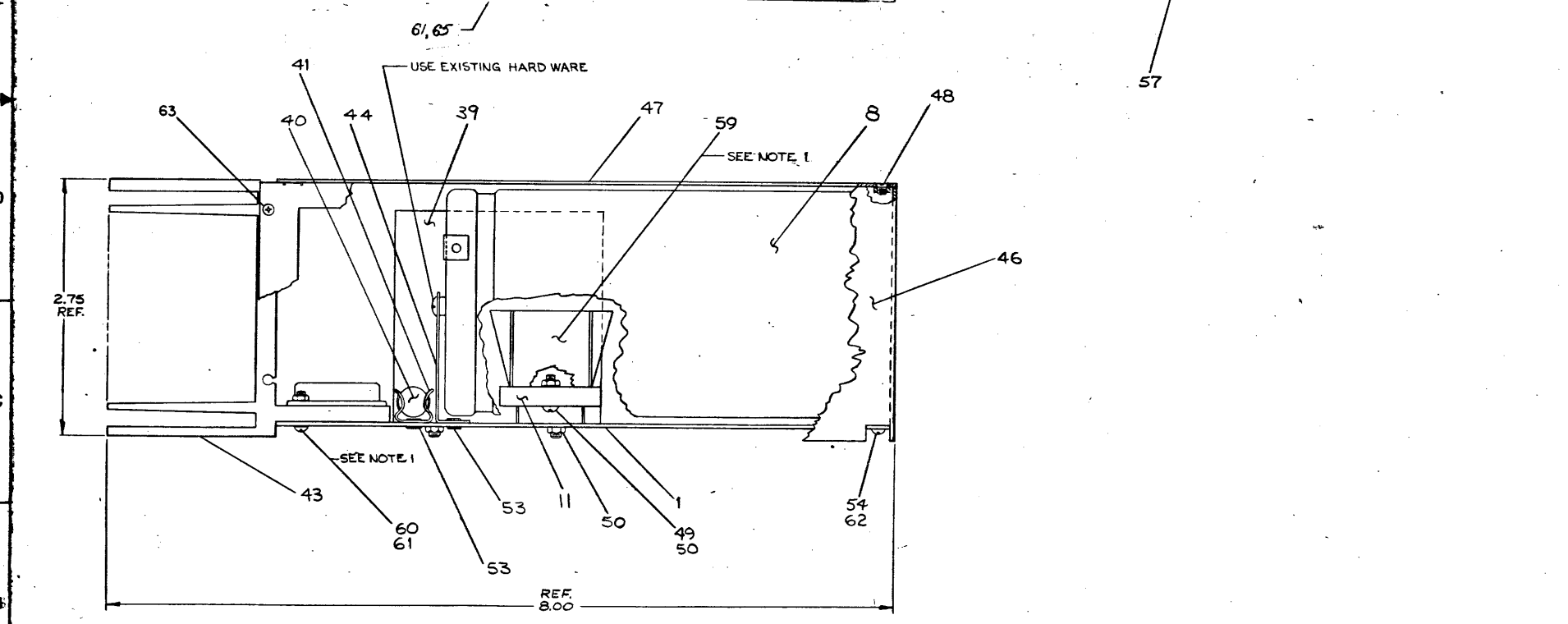
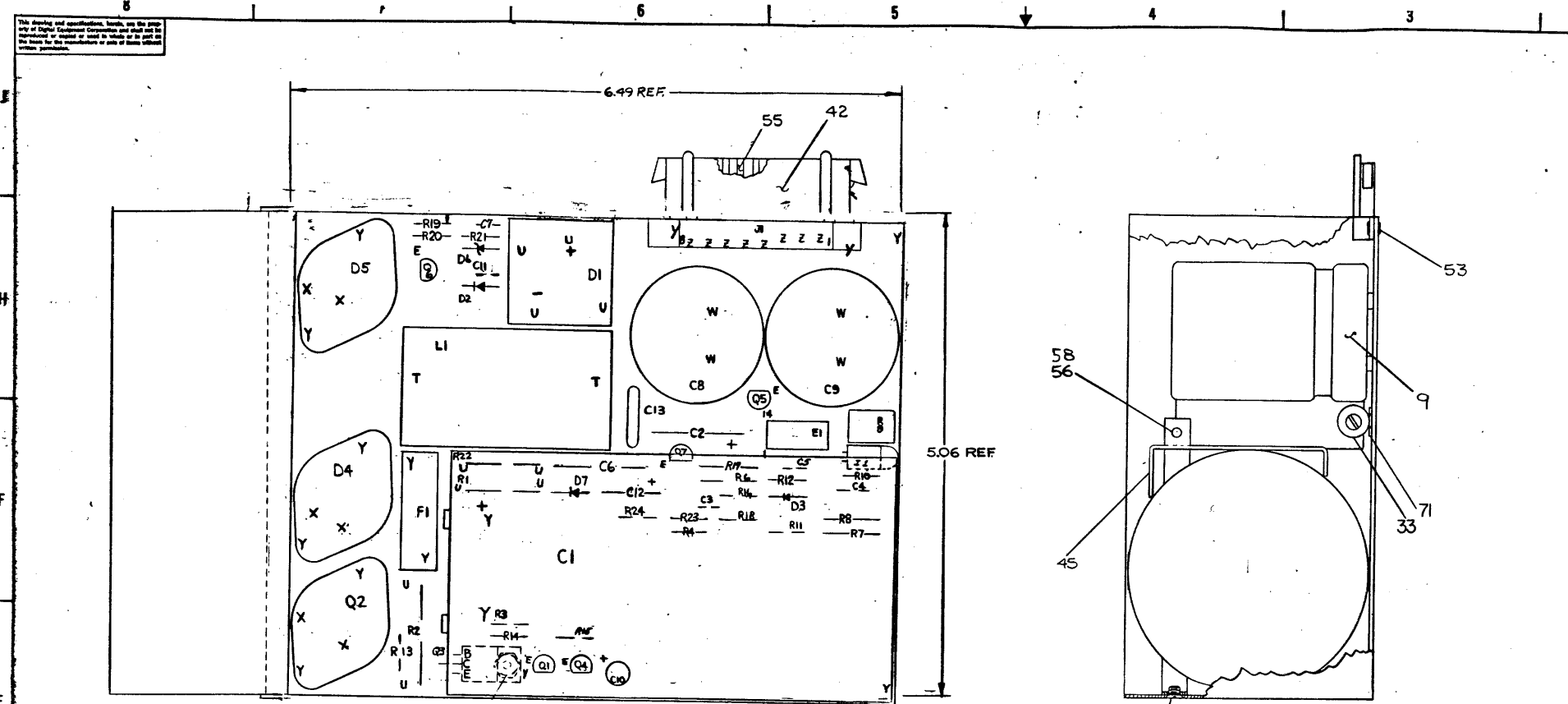
| REV | DESCRIPTION | DATE |
|-----|-------------|---------|
| 1 | ISSUED | 2-1-72 |
| 2 | REVISED | 4/27/72 |
| 3 | REVISED | 5/17/72 |
| 4 | REVISED | 5/17/72 |
| 5 | REVISED | 5/17/72 |
| 6 | REVISED | 5/17/72 |
| 7 | REVISED | 5/17/72 |
| 8 | REVISED | 5/17/72 |
| 9 | REVISED | 5/17/72 |
| 10 | REVISED | 5/17/72 |
| 11 | REVISED | 5/17/72 |
| 12 | REVISED | 5/17/72 |
| 13 | REVISED | 5/17/72 |
| 14 | REVISED | 5/17/72 |
| 15 | REVISED | 5/17/72 |
| 16 | REVISED | 5/17/72 |
| 17 | REVISED | 5/17/72 |
| 18 | REVISED | 5/17/72 |
| 19 | REVISED | 5/17/72 |
| 20 | REVISED | 5/17/72 |
| 21 | REVISED | 5/17/72 |
| 22 | REVISED | 5/17/72 |
| 23 | REVISED | 5/17/72 |
| 24 | REVISED | 5/17/72 |
| 25 | REVISED | 5/17/72 |
| 26 | REVISED | 5/17/72 |
| 27 | REVISED | 5/17/72 |
| 28 | REVISED | 5/17/72 |
| 29 | REVISED | 5/17/72 |
| 30 | REVISED | 5/17/72 |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|---------------------|----------|----------|
| | | PARTS LIST | | |
| | | ETCH BOARD REV E | | |
| | | DRN DATE 11-8-71 | | |
| | | CHK'D DATE 11-8-71 | | |
| | | ENG'D DATE 11/72 | | |
| | | PROJ ENG DATE 11/72 | | |
| | | PROJ DATE 11/72 | | |
| | | NEXT HIGHER ASSY | | |
| | | SCALE | | |
| | | SHEET 1 OF 1 | | |
| | | DISTRIBUTION | | |
| | | TITLE | | |
| | | -15V REG. | | |
| | | SIZE CODE | | |
| | | NUMBER | | |
| | | REV | | |
| | | L | | |

SEMICONDUCTOR CONVERSION CHART

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SIZE CODE
DICS H745-0-1
REV
L



| | | | | | | |
|--|-------|------|-------------|-----|---------|-------|
| IC TYPE | GND | 495V | ITEM NO | AWG | FROM PT | TO PT |
| GND AND 495V ARE USUALLY PINS 7 AND 14 RESPECTIVELY. EXCEPTING ARE STATED ABOVE. | | | | | | |
| IC PIN LOCATIONS | | | JUMPER LIST | | | |
| 7 | 11,12 | | | | | |

NOTE:
 1. APPLY ITEM #51 (THERMAL COMPOUND) BETWEEN TRANSISTOR AND INSULATOR, WASHER (ITEM #52) ALSO BETWEEN WASHER & HEAT SINK FOR Q2, Q4, Q5. ALSO APPLY ITEM #51 (COMPOUND) BETWEEN ITEM #11 (DIODE BRIDGE AND ITEM #59 (HEAT SINK).
 2. 1010621 MAY BE SUBSTITUTED FOR C13 (1000030).

| QTY. | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|------|------------------|------------------------------------|------------------|----------|
| | | ASSY/DRILLING HOLE LAYOUT | D-AM-H745-0-5 | 70 |
| | | PACKING INSTRUCTIONS | API-3700074-0-0 | 69 |
| 1 | R18 | RES 680 1/4W 5% | 1301424 | 68 |
| 1 | R23 | RES 300 1/4W 5% | 1301424 | 67 |
| 1 | C1A (SEE NOTE 2) | CAP 0.1UF 100V 20% | 1000030 | 66 |
| 1 | Z1 | SCR PH #4-40 X 5/16 LG | 800600-1 | 65 |
| 1 | Z1 | LAMP 15V | 1205163 | 64 |
| 4 | | SCR PPH #4 X 5/16 LG, SELF TAPPING | 8009442 | 63 |
| 2 | | WASHER #4 | 8006632 | 62 |
| 7 | | NUT NIPS #4-40 | 8008557 | 61 |
| 8 | | SCR PH PPH #4-40 X 1 1/2 LG | 8008013-1 | 60 |
| 1 | | HEAT SINK BRIDGE RECT | 1210807 | 59 |
| 1 | | SCR PH PPH #4-40 X 1 1/2 LG | 8008020-1 | 58 |
| 1 | | SCR PH FLT #4-32 X 1/4 LG | 8008020-2 | 57 |
| 1 | | WASHER LOCK #6 | 8007640 | 56 |
| 8 | | CONTACT FEMALE | 1208450 | 55 |
| 2 | | SCR PH PPH #4-40 X 1 1/2 LG | 8008020-1 | 54 |
| 8 | | EYELETS #6-4-7 | 8008732 | 53 |
| 3 | | INSULATOR WASHER | 8008721 | 52 |
| 1 | | THERMAL COMPOUND | 8008288 | 51 |
| 3 | | NUT NIPS #6-32 | 8008185 | 50 |
| 1 | | SCR PH PPH #6-32 X 1 1/2 LG | 8008024-1 | 49 |
| 4 | | SCR PH FLT #4-40 X 5/16 LG | 8008010-2 | 48 |
| 1 | | COVER COMPONENT | C-40-5300780-4-0 | 47 |
| 1 | | REGULATOR BRKT | D-1A-5300780-4-2 | 46 |
| 1 | | 2.5 HOLDER CAPACITOR | C-1A-5300781-0-0 | 45 |
| 2 | | STRAP CAPACITOR | C-40-5300780-0-0 | 44 |
| 1 | | HEAT SINK | D-PS-1210737-0-0 | 43 |
| 1 | J1 | CONN. WIRE-N-LOCK & PIN | 1208040 | 42 |
| 2 | | FUSE CLIP | 8007203 | 41 |
| 1 | F1 | FUSE ALC 15 | 8007228 | 40 |
| 1 | L1 | REACTOR 80 UHV | 8010850 | 39 |
| 1 | E1 | INTERMEDIATE CIRCUIT UNITZC | 1810415 | 38 |
| 1 | Q1 | TRANSISTOR 649H | 1510709 | 37 |
| 2 | Q1, Q2 | TRANSISTOR 405 | 1510708 | 36 |
| 2 | Q1, Q4 | TRANSISTOR 405 | 1510705 | 35 |
| 1 | Q2 | TRANSISTOR 2N6302 | 1510704 | 34 |
| 1 | R8 | RES VARIABLE 200 OH 20% | 1310852 | 33 |
| 1 | R20 | RES 100 OH 5% | 1302229 | 32 |
| 1 | R11 | RES 1 MEH 1/2W 5% | 1302525 | 31 |
| 1 | R4 | RES 5.6 K 1/4W 5% | 1301874 | 30 |
| 2 | R15, R16 | RES 3 BK 1/2W 5% | 1300444 | 29 |
| 2 | R19, R3 | RES 5.1 M 5% | 1300422 | 28 |
| 1 | R12 | RES 5M 1/2W 5% | 1302802 | 27 |
| 1 | R21 | RES 47 M 5% | 1300202 | 26 |
| 1 | R17 | RES 39.2K 1/2W 1% | 1305245 | 25 |
| 1 | R10 | RES 1K 1/2W 5% | 1300985 | 24 |
| 2 | R13, R14 | RES 10 M 5% | 1301312 | 23 |
| 1 | R6 | RES 7.5K 1/2W 1% | 1305322 | 22 |
| 2 | R7, R8 | RES 5.1 1/2W 5% | 1302411 | 21 |
| 1 | R22 | RES 5.1 M 5% | 1302126 | 20 |
| 1 | R24 | RES 10K 1/2W 5% | 1300478 | 19 |
| 1 | R2 | RES 10K 1/2W 5% | 1310701-1 | 18 |
| 1 | R1 | RES 3 BK 10 10% | 1302927 | 17 |
| 1 | D8 | DIODE 1N967 | 1110068 | 16 |
| 1 | D5 | SCR MCR6AP-2 | 1108463 | 15 |
| 1 | D4 | DIODE 1N9117 | 1110715 | 14 |
| 3 | D3, D7, D2 | DIODE 1N64 | 1100114 | 13 |
| 1 | D7 | TRANSISTOR UNI JUNCTION 2N6328 | 1510077 | 12 |
| 1 | D1 | DIODE BRIDGE | 1110714 | 11 |
| 1 | C12 | CAP 15UF 20V 10% | 1004812 | 10 |
| 2 | C9, C8 | CAP 3.0K UF 25V | 1010103 | 9 |
| 1 | C1 | CAP 31K UF 50V | 1010858 | 8 |
| 1 | C10 | CAP 1.0 UF 25V | 1010866-01 | 7 |
| 1 | C2 | CAP 50 UF 25V -10+75% | 1001786 | 6 |
| 1 | C3 | CAP 068 UF 100V 10% | 1000052 | 5 |
| 1 | C4 | CAP 2700PF 100V 5% | 1001637 | 4 |
| 3 | C11, C3 | CAP 01UF 100V 20% | 1001610 | 3 |
| 1 | C5 | CAP 50UF 25V | 1000013 | 2 |
| 1 | | ETCHED CIRCUIT BOARD | 8741724-0-0 | 1 |
| 1 | | WIRE BONDING | 8741724-0-0 | 1 |
| 1 | | ETCHED CIRCUIT BOARD | 8741724-0-0 | 1 |
| 1 | | WIRE BONDING | 8741724-0-0 | 1 |

900B206 71 ETCH BOARD REV E

0664 IN3606

SEMICONDUCTOR CONVERSION CHART

DEC NO. EIA NO. DEC NO. EIA NO.

SCALE: 1" = 1"

DATE: 11/72

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

APPROVED BY: [Signature]

REVISIONS:

| NO. | DESCRIPTION | DATE |
|-----|----------------|-------|
| 1 | INITIAL DESIGN | 11/72 |
| 2 | REVISED | 11/72 |

EQUIPMENT CORPORATION

-15 REGULATOR

UJA H745-0-0

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

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DRAWING DIRECTORY
CIRCUIT SCHEMATIC
UNIT ASS'Y

SEQUENCE
B-DD-H746-0
D-CS-H746-0-1
E-UA-H746-0-0

SEQUENCE
MFG SET
TEST PROCEDURE
MFG SPEC.
PACKAGING INSTRUCTION
A-SP-H746-0-3
A-SP-H746-0-8
A-PI-3700074-0-0

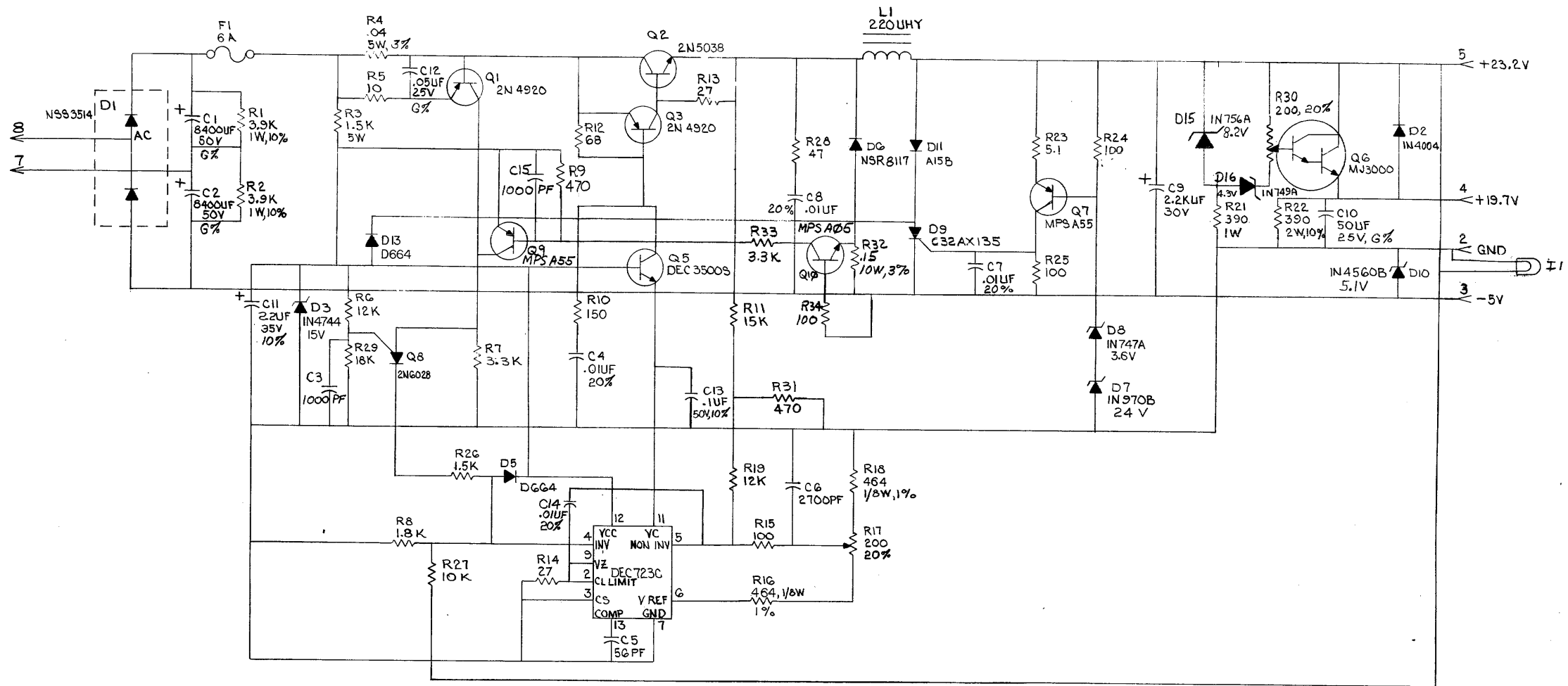
| VARIATION | TITLE | PRINT SET TYPE | | | | |
|-----------|---------------|----------------|--|--|--|--|
| | | H746-1 | | | | |
| H746 | MOS REGULATOR | X | | | | |
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| REVISIONS | CHG. NO. | REV | DATE | USED ON OPTION/MODEL | DRN. | DATE | TITLE | SIZE | CODE | NUMBER | REV |
| | -00005 | A | | | D. FONTAINE | 2-7-72 | | | | | |
| -00006 | B | | | CHK'D | DATE | | | | | | |
| -00007 | C | | | PROJ ENG | DATE | | | | | | |
| -00012 | D | | | PROD. | DATE | | | | | | |
| | | | | FIELD SERV. | DATE | | | | | | |
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| CUSTOMER PRINT SET | | | | ELECTRICAL | | | | | CUSTOMER PRINT SET | | | | MECHANICAL | | | | | | |
|--------------------|---------|--|---|------------|---------------|-----|-----------|-------------------|--------------------|--------|---------|--|------------|----------|------------------|-----|-----------|-----------------------|------------|
| H746-1 | MFG SET | | | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. | H746-1 | MFG SET | | | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. |
| X | | | | 1 | D-CS-H746-0-1 | K | 1 | CIRCUIT SCHEMATIC | H746 | X | | | | 1 | E-UA-H746-0-0 | # | 1 | UNIT ASSY | H746 |
| | | | X | | A-SP-H746-0-3 | # | | TEST PROCEDURE | H746 | | | | | | D-PS-1210737-0-0 | # | 1 | HEAT SINK | H746 |
| | | | X | | A-SP-H746-0-8 | # | | MFG. SPEC | H746 | | | | | | D-1A-5309756-0-0 | # | 1 | REGULATOR BRK'IT | H746 |
| | | | | | | | | | | | | | | | C-1A-5309758-0-0 | # | 1 | 1.5.CAP BRK'IT | H746 |
| | | | | | | | | | | | | | | | C-1A-5309760-0-0 | # | 1 | COMPONENT COVER | H746 |
| | | | | | | | | | | | | | | | C-MD-5309759-0-0 | # | 1 | CAPACITOR STRAP | H746 |
| | | | | | | | | | | | | | | | A-PI-3700074-0-0 | - | 2 | PACKAGING INSTRUCTION | H746 |
| | | | | | | | | | | | | | | | A-PS-9905211-0-0 | - | 2 | OUTER CARTON | |
| | | | | | | | | | | | | | | | A-PS-9905212-0-0 | - | 2 | INNER PACKAGE | |

| | | | | |
|---------------|------|------|--------|-----|
| TITLE | SIZE | CODE | NUMBER | REV |
| MOS REGULATOR | B | DD | H746-0 | D |

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UNLESS OTHERWISE INDICATED:
 CAPACITORS = 100V, 5%
 RESISTORS = 1/4W, 5%
 G% = -10% + 75%

| REV | DESCRIPTION | DATE |
|-----|--|---------|
| 1 | As Shown | 8/1/72 |
| 2 | Change R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34 | 3/27/72 |
| 3 | Change C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15 | 3/27/72 |
| 4 | Change Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8 | 3/27/72 |
| 5 | Change D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16 | 3/27/72 |
| 6 | Change L1 | 3/27/72 |
| 7 | Change F1 | 3/27/72 |

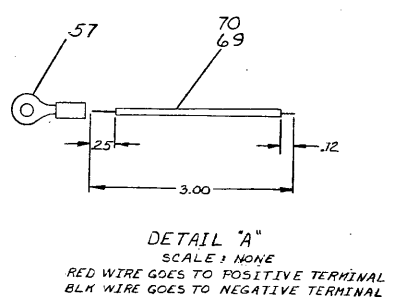
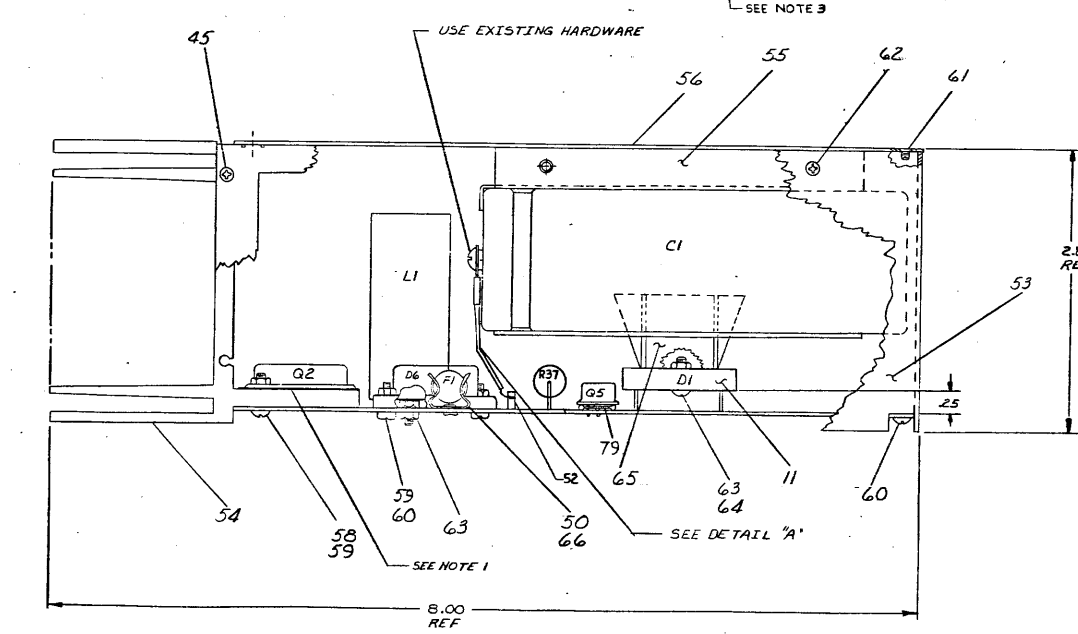
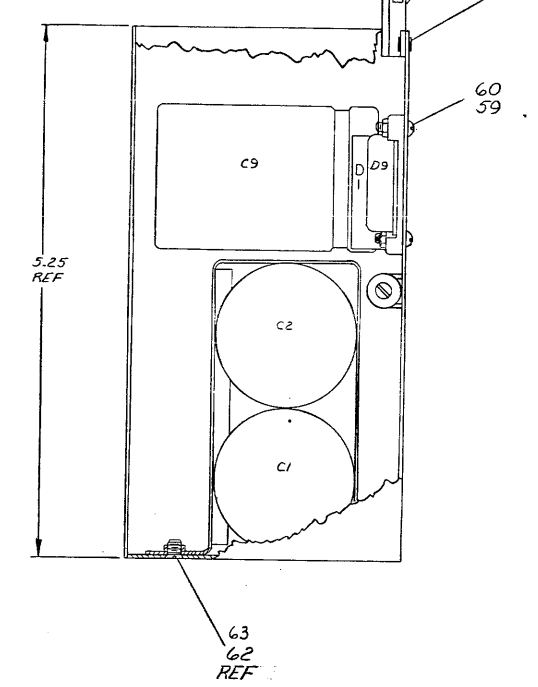
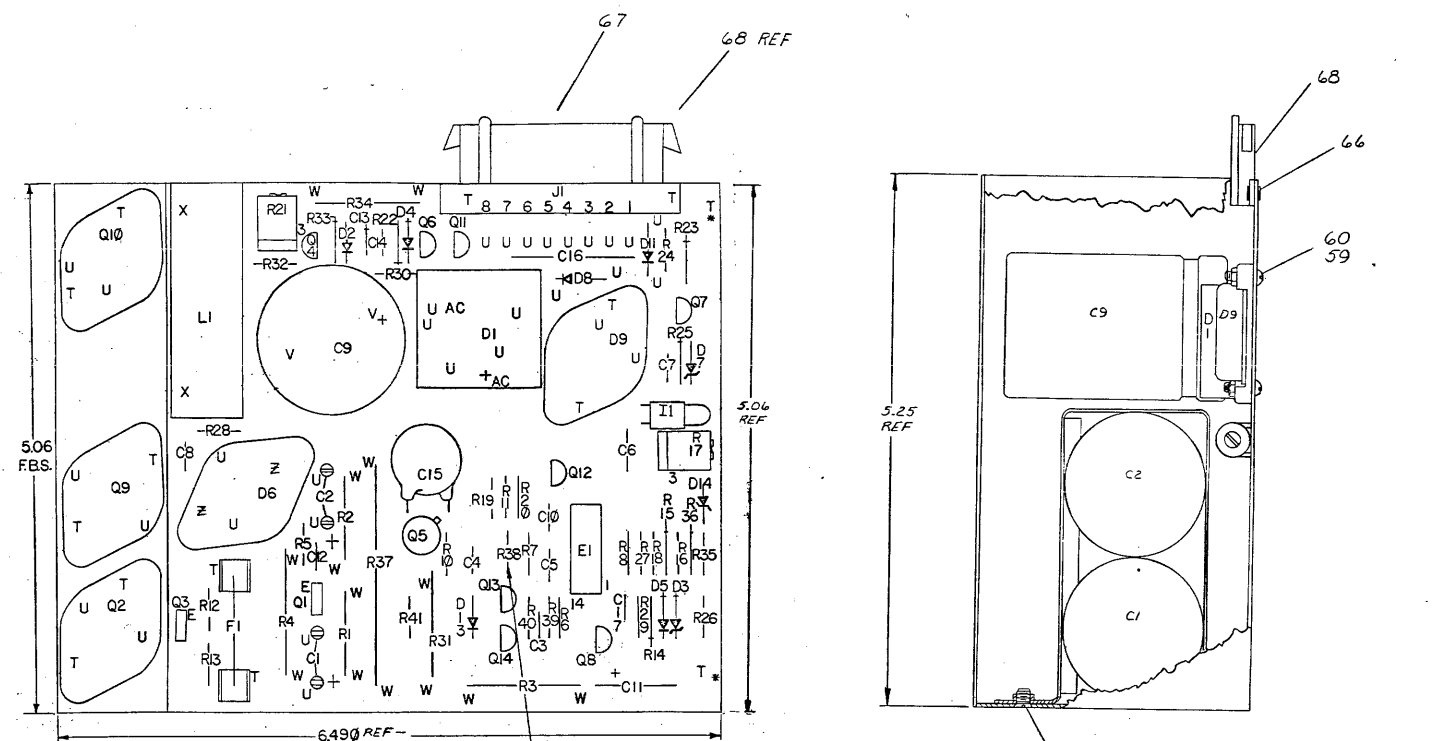
| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|------------------------|-----------------|--------------------------------|---|----------|
| PARTS LIST | | | | |
| ETCH BOARD REV H | | | | |
| DRN. Roger V. Tricette | | DATE 8/1/72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| CHKD. J. Hager | | DATE 2/1/72 | TITLE MOS REGULATOR | |
| ENG. J. Hager | | DATE 7/1/72 | SIZE CODE DCS | |
| PROJ. ENG. J. Hager | | DATE 7/1/72 | NUMBER H746-0-1 | |
| PROB. J. Hager | | DATE 2/3/72 | REV. P | |
| NEXT HIGHER ASSY | | | | |
| SCALE | | SHEET 1 OF 1 | | |
| DIST. | | SEMICONDUCTOR CONVERSION CHART | | |

REV. P
 NUMBER H746-0-1
 SIZE CODE DCS

THE ABOVE INFORMATION IS UNCLASSIFIED UNLESS INDICATED OTHERWISE BY A DATE AND AUTHORITY. IT IS THE POLICY OF THE COMPANY TO REMOVE RESTRICTIONS FROM INFORMATION IN ORDER TO MAKE IT AS AVAILABLE AS POSSIBLE TO THE PUBLIC.

WILSON ELECTRONIC CORPORATION
ELECTRONIC EQUIPMENT CORPORATION

- NOTES:
1. APPLY ITEM #71 (COMPOUND) ON BOTH SIDES OF ITEM #72 (INSULATOR WASHER) FOR Q2, Q3, Q4. ALSO APPLY ITEM #75 (DIODE BRIDGE D1) AND ITEM #76 (HEAT SINK BRIDGE RECT.) - LESS OTHERWISE INDICATED.
 2. TRANSISTORS ARE 100V, 15% CAPACITORS ARE 100V, 15%.
 3. ADD INSULATION (9107256-11) TO BOTH LEADS OF R38 TO AVOID SHORT TO ETCH.



DELETED COMPONENTS

| | |
|-----------|---------|
| RESISTORS | R9 |
| DIODES | D10, D2 |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|------------------------------|--|------------------|----------|
| 1 | R39 | INSULATION | 9107256-11 | 90 |
| 1 | R37 | RES 220 1/4W 5% | 1300271 | 89 |
| 1 | R38 | RES. 1 10W 1% | 130910B | 88 |
| 1 | R36 | RES 1K 1/2W 1% | 1310071 | 87 |
| 1 | C16 | CAP 100UF 25V | 1002791 | 86 |
| 1 | Q10 | TRANSISTOR MJ300 | 1312712 | 85 |
| 1 | Q9 | TRANSISTOR MJ300 | 1311349 | 84 |
| 1 | C15 | CAP 100 PF 100V 15% DM | 1000216 | 83 |
| 2 | Q4, Q14 | TRANSISTOR MPS 403 | 1310265 | 82 |
| 1 | D2 | DIODE D083 | 1102100 | 81 |
| 2 | (UNDER Q1 R2) | TRANSIPAD | 9207205 | 79 |
| 1 | R31 | RES 25K 1/8W 10% | 1310117 | 78 |
| 2 | C4, C17 | CAP 100UF 25V 10% DM | 1000279 | 77 |
| 1 | R32 | RES 300K 1/8W 1% | 1305122 | 76 |
| 2 | R33, R8 | RES 1.75K 1/8W 1% | 1302612 | 75 |
| 1 | R17 | RES 15K 1/8W 15% | 1300294 | 74 |
| 1 | R20 | RES 270K 1/4W 5% | 1300316 | 73 |
| | | | | REF |
| 3 | | WASHER INSULATOR | 910721 | 72 |
| | | COMPOUND THERMAL | 910028 | 71 |
| 1 | R37 | WIRE BONDING STRIP 1/16" X 1/8" (BLK) | 9107256-00 | 70 |
| 1 | J1 | WIRE MOUNTING STRIP 1/16" X 1/8" (RED) | 9107256-01 | 69 |
| 1 | J1 | MATE-LOCK CONN 8 PIN | 120569 | 68 |
| 1 | | FINISCKET, MATE-MATE | 120568 | 67 |
| 1 | | DIODE D1 | 1102100 | 66 |
| 1 | | HEAT SINK BRIDGE RECTIFIER | 1210001 | 65 |
| 1 | | SCR PWR 100V 500mA | 3000204 | 64 |
| 5 | | REPS MTF 8-32 155 | 900185 | 63 |
| 4 | | SCR PIN PLAT HD 8-32 1/8" | 9000212 | 62 |
| 1 | | SCR PIN PLAT HD 4-40 1/4" | 9002009 | 61 |
| 10 | | SCR PIN HD 4-40 1/8" | 9006111 | 60 |
| 4 | | REPS MTF 4-40 | 900650 | 59 |
| 4 | | SCR PIN HD 4-40 1/4" | 9002011 | 58 |
| 4 | | COVER CAP | 900200 | 57 |
| 1 | | 1.5 CAP. BRKT | C-NO-3302760-0-0 | 56 |
| 1 | | HEAT SINK REGULATOR | D-PS-1710712-0-0 | 55 |
| 1 | | BRACKET REG | D-1A-309756-4-0 | 53 |
| 1 | Q9 | TRANSISTOR 2N208 | 900176 | 52 |
| 2 | | FUSE CLIP | 15-10011 | 51 |
| 1 | F1 | FUSE 10 AMP | 90-0830 | 50 |
| 1 | L1 | INDUCTOR 170 OHM | 16-10419 | 49 |
| 1 | E1 | INTEGRATED CIRCUIT 723 | 16-10415 | 47 |
| 6 | Q7, Q8, Q11, Q12, Q13 | TRANSISTOR PPS 455 | 15-10006 | 46 |
| 4 | | SCR PIN PLAT HD BLK SELF TAPPING | 900142 | 45 |
| 1 | Q5 | TRANSISTOR 2N3850 | 15-02089 | 44 |
| 1 | Q2 | TRANSISTOR 2N208 | 15-10089 | 43 |
| 2 | Q1, Q3 | TRANSISTOR 2N208 | 15-10085 | 42 |
| 2 | R17, R21 | RES VARIABLE 200% POT | 15-10082 | 41 |
| 2 | R22, R26 | RES 5.1 1/8W | 15-09422 | 40 |
| 1 | R18 | RES 25K 1/8W 1% | 1304057 | 39 |
| 3 | R14, R15, R5 | ELECTRICAL SCHEMATIC | E-CS-11554-0-1 | 38 |
| 1 | R10 | RES 150 1/8W | 13-0102 | 37 |
| REF | | ASSY/DRILLING HOLE LAYOUT | D-AM-11554-0-1 | 36 |
| 2 | R7, R10 | RES. 2K 1/4W 5% | 1302988 | 34 |
| 2 | R6, R19 | RES 1K 1/8W | 13-04088 | 33 |
| 6 | R15, R25, R30, R24, R35, R41 | RES 100 1/8W | 13-02029 | 32 |
| 1 | R12 | RES 66K 1/4W 5% | 13-00219 | 31 |
| 1 | R17 | RES 10K 1/4W 1% | 1305370 | 30 |
| 1 | R32 | RES 3K 1/4W 1% | 13-02644 | 29 |
| 1 | R16 | RES 20K 1/4W 1% | 13-02124 | 27 |
| 1 | R29 | RES 10K 1/8W | 13-02485 | 26 |
| 1 | R4 | CAP 22UF 50V 10% S TANT | 10-02431 | 25 |
| 1 | R3 | RES 1.5K 1/2W 5% | 13-11562 | 24 |
| 1 | R34 | RES 47 2W 5% | 13-05258 | 22 |
| 1 | R2 | RES 1.5K 1/8W | 13-00861 | 21 |
| 2 | R1, R2 | RES 3.9 1/8W 10% | 13-0009 | 19 |
| 1 | R28 | RES 47 1/8W | 13-00297 | 20 |
| 2 | D11, D8 | DIODE 1N5624 | 1110420 | 18 |
| 1 | D14 | DIODE 752A ZENER | 1102808 | 17 |
| 1 | D9 | DIODE 1N4007 | 11-0295 | 16 |
| 1 | D7 | DIODE 1N4007 | 11-0295 | 15 |
| 1 | D6 | DIODE 1N4007 | 11-10715 | 13 |
| 1 | D5 | DIODE 1N4007 | 11-10715 | 12 |
| 1 | D1 | DIODE 1N4007 | 11-02648 | 12 |
| 1 | D10 | DIODE 1N4007 | 11-02648 | 11 |
| 3 | D3, D13, D4 | DIODE D084 | 11-02614 | 11 |
| 1 | C15 | CAP 1UF 100V 20% DISC | 1000030 | 10 |
| 1 | C4 | CAP 2.2UF 50V 10% AL EL. | 10-10569 | 8 |
| 5 | C2, C3, C10, C9 | CAP 10UF 50V 10% DISC. | 10-0810 | 7 |
| 1 | C5 | CAP 220UF 25V 10% DM | 10-0837 | 6 |
| 1 | C6 | CAP 50UF 10V 10% DM | 10-08012 | 5 |
| 1 | J1 | LAMP 6V 400MA | 12-11230 | 4 |
| 2 | C1, C2 | CAP 10UF 50V 10% AL EL. | 10-0810 | 3 |
| 1 | | 1.1 COORDINATE HOLE LOC | 90-12623 | 2 |
| 1 | | MODULE ESD HISTORY | 90-12623 | 1 |
| | | 1.1 COORDINATE HOLE LOCATION | 90-12623-0-4 | REF |

JUMPER LIST

| IC TYPE | GND | +5V | ITEM NO. | AWG | FROM PT | TO PT |
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SEMICONDUCTOR CONVERSION CHART

DATE: 4/27/77

PROJ ENG: [blank]

DESIGNER: [blank]

REV 1

REV 2

REV 3

REV 4

REV 5

REV 6

REV 7

REV 8

REV 9

REV 10

REV 11

REV 12

REV 13

REV 14

REV 15

REV 16

REV 17

REV 18

REV 19

REV 20

REV 21

REV 22

REV 23

REV 24

REV 25

REV 26

REV 27

REV 28

REV 29

REV 30

REV 31

REV 32

REV 33

REV 34

REV 35

REV 36

REV 37

REV 38

REV 39

REV 40

REV 41

REV 42

REV 43

REV 44

REV 45

REV 46

REV 47

REV 48

REV 49

REV 50

REV 51

REV 52

REV 53

REV 54

REV 55

REV 56

REV 57

REV 58

REV 59

REV 60

REV 61

REV 62

REV 63

REV 64

REV 65

REV 66

REV 67

REV 68

REV 69

REV 70

REV 71

REV 72

REV 73

REV 74

REV 75

REV 76

REV 77

REV 78

REV 79

REV 80

REV 81

REV 82

REV 83

REV 84

REV 85

REV 86

REV 87

REV 88

REV 89

REV 90

REV 91

REV 92

REV 93

REV 94

REV 95

REV 96

REV 97

REV 98

REV 99

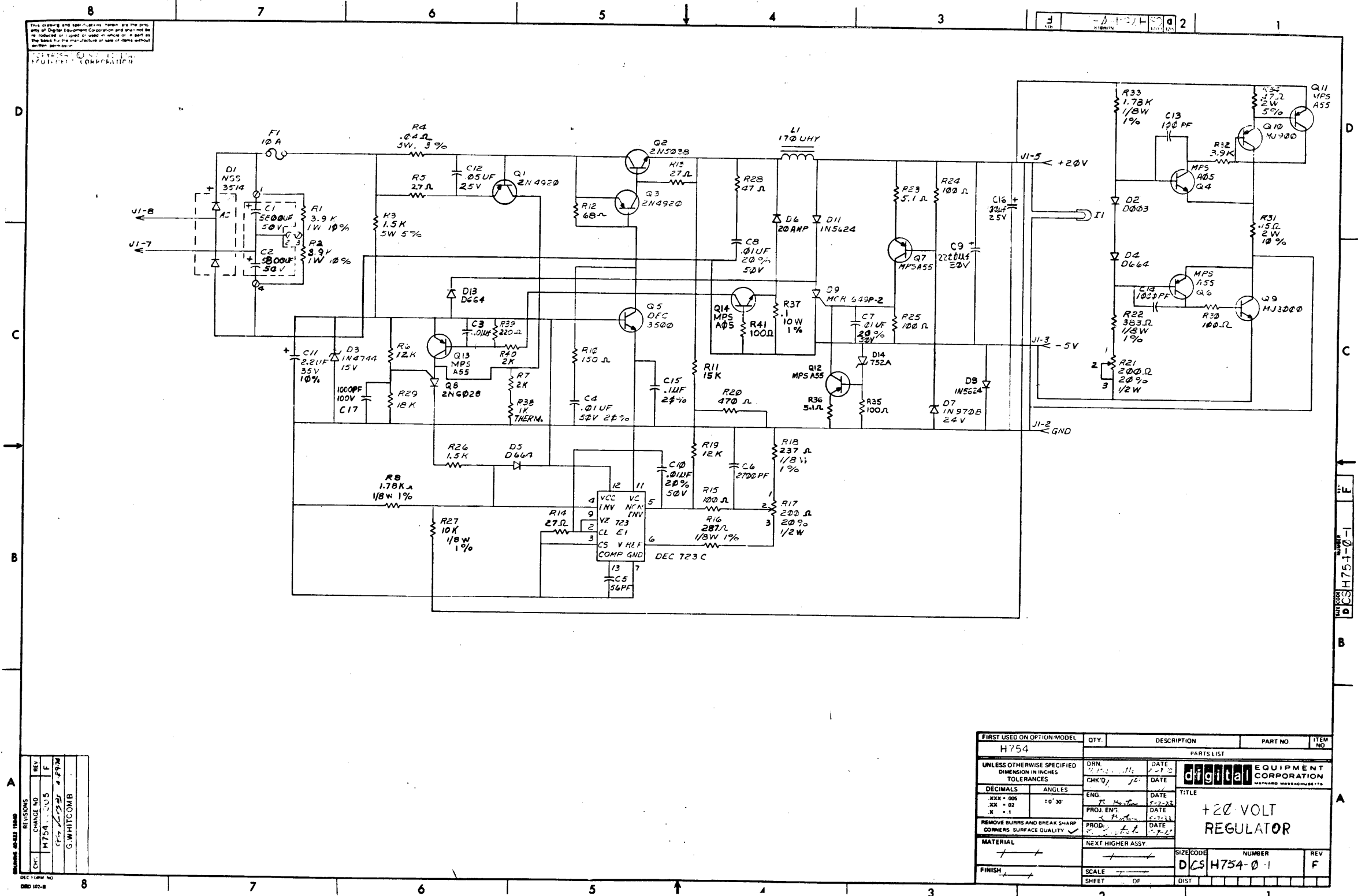
REV 100

PARTS LIST

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|------------------------------|--|------------------|----------|
| 1 | R39 | INSULATION | 9107256-11 | 90 |
| 1 | R37 | RES 220 1/4W 5% | 1300271 | 89 |
| 1 | R38 | RES. 1 10W 1% | 130910B | 88 |
| 1 | R36 | RES 1K 1/2W 1% | 1310071 | 87 |
| 1 | C16 | CAP 100UF 25V | 1002791 | 86 |
| 1 | Q10 | TRANSISTOR MJ300 | 1312712 | 85 |
| 1 | Q9 | TRANSISTOR MJ300 | 1311349 | 84 |
| 1 | C15 | CAP 100 PF 100V 15% DM | 1000216 | 83 |
| 2 | Q4, Q14 | TRANSISTOR MPS 403 | 1310265 | 82 |
| 1 | D2 | DIODE D083 | 1102100 | 81 |
| 2 | (UNDER Q1 R2) | TRANSIPAD | 9207205 | 79 |
| 1 | R31 | RES 25K 1/8W 10% | 1310117 | 78 |
| 2 | C4, C17 | CAP 100UF 25V 10% DM | 1000279 | 77 |
| 1 | R32 | RES 300K 1/8W 1% | 1305122 | 76 |
| 2 | R33, R8 | RES 1.75K 1/8W 1% | 1302612 | 75 |
| 1 | R17 | RES 15K 1/8W 15% | 1300294 | 74 |
| 1 | R20 | RES 270K 1/4W 5% | 1300316 | 73 |
| | | | | REF |
| 3 | | WASHER INSULATOR | 910721 | 72 |
| | | COMPOUND THERMAL | 910028 | 71 |
| 1 | R37 | WIRE BONDING STRIP 1/16" X 1/8" (BLK) | 9107256-00 | 70 |
| 1 | J1 | WIRE MOUNTING STRIP 1/16" X 1/8" (RED) | 9107256-01 | 69 |
| 1 | J1 | MATE-LOCK CONN 8 PIN | 120569 | 68 |
| 1 | | FINISCKET, MATE-MATE | 120568 | 67 |
| 1 | | DIODE D1 | 1102100 | 66 |
| 1 | | HEAT SINK BRIDGE RECTIFIER | 1210001 | 65 |
| 1 | | SCR PWR 100V 500mA | 3000204 | 64 |
| 5 | | REPS MTF 8-32 155 | 900185 | 63 |
| 4 | | SCR PIN PLAT HD 8-32 1/8" | 9000212 | 62 |
| 1 | | SCR PIN PLAT HD 4-40 1/4" | 9002009 | 61 |
| 10 | | SCR PIN HD 4-40 1/8" | 9006111 | 60 |
| 4 | | REPS MTF 4-40 | 900650 | 59 |
| 4 | | SCR PIN HD 4-40 1/4" | 9002011 | 58 |
| 4 | | COVER CAP | 900200 | 57 |
| 1 | | 1.5 CAP. BRKT | C-NO-3302760-0-0 | 56 |
| 1 | | HEAT SINK REGULATOR | D-PS-1710712-0-0 | 55 |
| 1 | | BRACKET REG | D-1A-309756-4-0 | 53 |
| 1 | Q9 | TRANSISTOR 2N208 | 900176 | 52 |
| 2 | | FUSE CLIP | 15-10011 | 51 |
| 1 | F1 | FUSE 10 AMP | 90-0830 | 50 |
| 1 | L1 | INDUCTOR 170 OHM | 16-10419 | 49 |
| 1 | E1 | INTEGRATED CIRCUIT 723 | 16-10415 | 47 |
| 6 | Q7, Q8, Q11, Q12, Q13 | TRANSISTOR PPS 455 | 15-10006 | 46 |
| 4 | | SCR PIN PLAT HD BLK SELF TAPPING | 900142 | 45 |
| 1 | Q5 | TRANSISTOR 2N3850 | 15-02089 | 44 |
| 1 | Q2 | TRANSISTOR 2N208 | 15-10089 | 43 |
| 2 | Q1, Q3 | TRANSISTOR 2N208 | 15-10085 | 42 |
| 2 | R17, R21 | RES VARIABLE 200% POT | 15-10082 | 41 |
| 2 | R22, R26 | RES 5.1 1/8W | 15-09422 | 40 |
| 1 | R18 | RES 25K 1/8W 1% | 1304057 | 39 |
| 3 | R14, R15, R5 | ELECTRICAL SCHEMATIC | E-CS-11554-0-1 | 38 |
| 1 | R10 | RES 150 1/8W | 13-0102 | 37 |
| REF | | ASSY/DRILLING HOLE LAYOUT | D-AM-11554-0-1 | 36 |
| 2 | R7, R10 | RES. 2K 1/4W 5% | 1302988 | 34 |
| 2 | R6, R19 | RES 1K 1/8W | 13-04088 | 33 |
| 6 | R15, R25, R30, R24, R35, R41 | RES 100 1/8W | 13-02029 | 32 |
| 1 | R12 | RES 66K 1/4W 5% | 13-00219 | 31 |
| 1 | R17 | RES 10K 1/4W 1% | 1305370 | 30 |
| 1 | R32 | RES 3K 1/4W 1% | 13-02644 | 29 |
| 1 | R16 | RES 20K 1/4W 1% | 13-02124 | 27 |
| 1 | R29 | RES 10K 1/8W | 13-02485 | 26 |
| 1 | R4 | CAP 22UF 50V 10% S TANT | 10-02431 | 25 |
| 1 | R3 | RES 1.5K 1/2W 5% | 13-11562 | 24 |
| 1 | R34 | RES 47 2W 5% | 13-05258 | 22 |
| 1 | R2 | RES 1.5K 1/8W | 13-00861 | 21 |
| 2 | R1, R2 | RES 3.9 1/8W 10% | 13-0009 | 19 |
| 1 | R28 | RES 47 1/8W | 13-00297 | 20 |
| 2 | D11, D8 | DIODE 1N5624 | 1110420 | 18 |
| 1 | D14 | DIODE 752A ZENER | 1102808 | 17 |
| 1 | D9 | DIODE 1N4007 | 11-0295 | 16 |
| 1 | D7 | DIODE 1N4007 | 11-0295 | 15 |
| 1 | D6 | DIODE 1N4007 | 11-10715 | 13 |
| 1 | D5 | DIODE 1N4007 | 11-10715 | 12 |
| 1 | D1 | DIODE 1N4007 | 11-02648 | 12 |
| 1 | D10 | DIODE 1N4007 | 11-02648 | 11 |
| 3 | D3, D13, D4 | DIODE D084 | 11-02614 | 11 |
| 1 | C15 | CAP 1UF 100V 20% DISC | 1000030 | 10 |
| 1 | C4 | CAP 2.2UF 50V 10% AL EL. | 10-10569 | 8 |
| 5 | C2, C3, C10, C9 | CAP 10UF 50V 10% DISC. | 10-0810 | 7 |
| 1 | C5 | CAP 220UF 25V 10% DM | 10-0837 | 6 |
| 1 | C6 | CAP 50UF 10V 10% DM | 10-08012 | 5 |
| 1 | J1 | LAMP 6V 400MA | 12-11230 | 4 |
| 2 | C1, C2 | CAP 10UF 50V 10% AL EL. | 10-0810 | 3 |
| 1 | | 1.1 COORDINATE HOLE LOC | 90-12623 | 2 |
| 1 | | MODULE ESD HISTORY | 90-12623 | 1 |
| | | 1. | | |

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DIGITAL EQUIPMENT CORPORATION

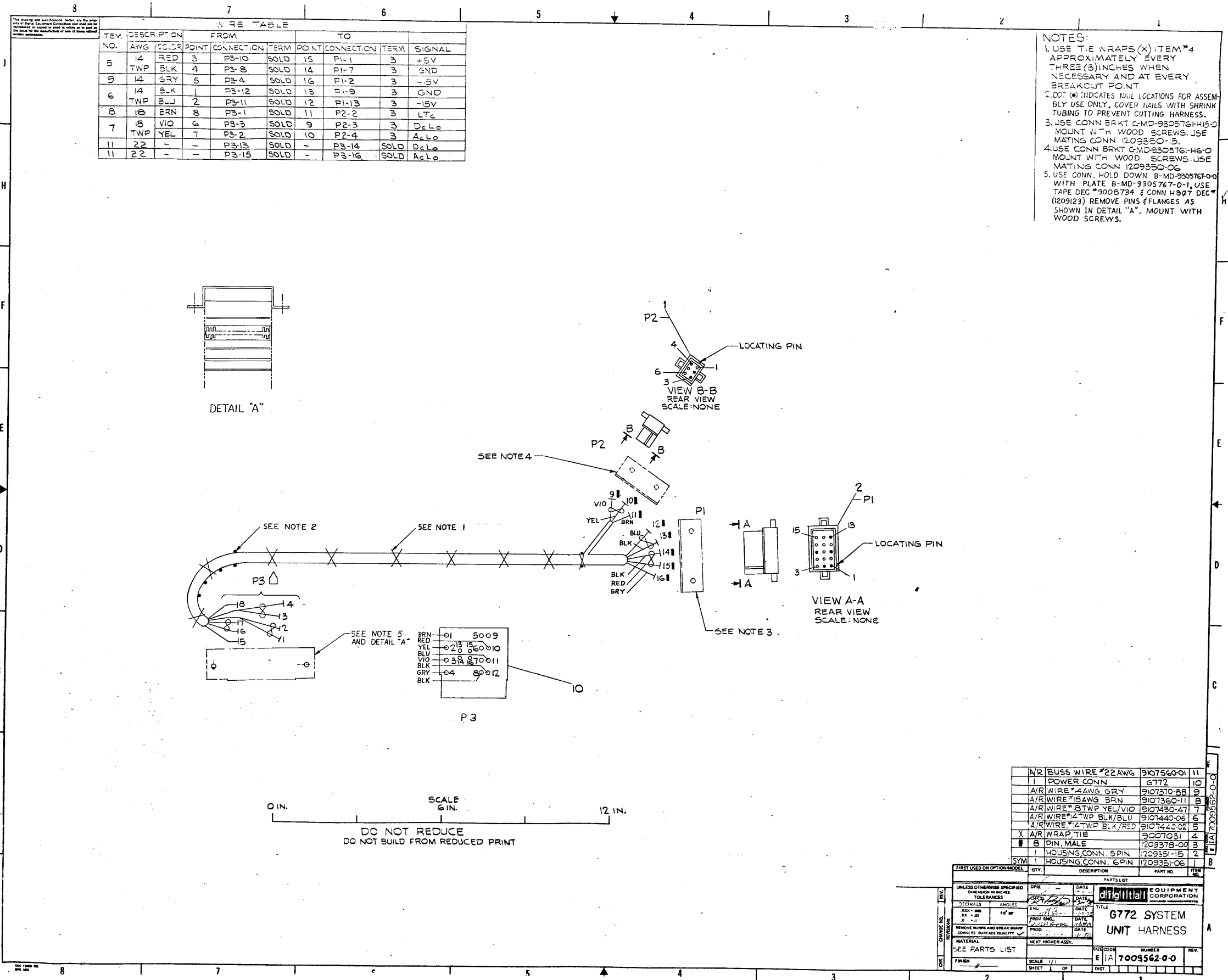


| REV | CHG NO | DATE | BY |
|-----|--------|---------|-------------|
| F | 1 | 1-27-68 | G. WHITCOMB |
| E | 1 | 1-27-68 | G. WHITCOMB |

| FIRST USED ON OPTION/MODEL | QTY | DESCRIPTION | PART NO | ITEM NO |
|----------------------------|-----|-------------|---------|---------|
| H754 | | | | |

| UNLESS OTHERWISE SPECIFIED | | DIMENSION IN INCHES | | TOLERANCES | |
|----------------------------|---------|---------------------|--------|------------|------|
| DECIMALS | ANGLES | FRAMES | ANGLES | DATE | DATE |
| .XXX - .006 | ±0° 30' | ENG. | DATE | DATE | DATE |
| .XXX - .02 | | PROJ. ENGR. | DATE | DATE | DATE |
| .XXX - .1 | | PRD. | DATE | DATE | DATE |

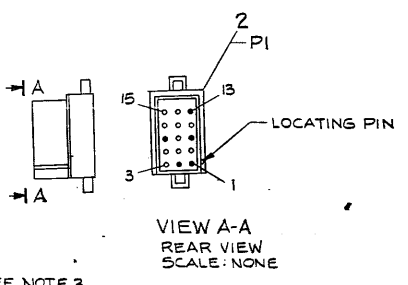
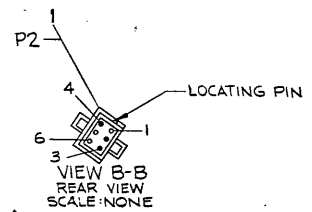
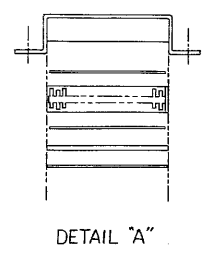
| PARTS LIST | | TITLE | |
|-------------------------------|--|--------------------|--|
| digital EQUIPMENT CORPORATION | | +20-VOLT REGULATOR | |
| D/E/S H754-0-1 | | REV F | |



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| WIRE TABLE | | | | | | | | | |
|------------|-----|---------|-------|------------|------|-------|------------|------|-------------------|
| ITEM NO. | AWG | COLOR | POINT | CONNECTION | TERM | POINT | CONNECTION | TERM | SIGNAL |
| 5 | 14 | RED | 3 | P3-10 | SOLD | 15 | P1-1 | 3 | +5V |
| 9 | 14 | TWP BLK | 4 | P3-8 | SOLD | 14 | P1-7 | 3 | SND |
| 6 | 14 | GRY | 5 | P3-4 | SOLD | 16 | P1-2 | 3 | -5V |
| 6 | 14 | BLK | 1 | P3-12 | SOLD | 13 | P1-9 | 3 | GND |
| 8 | 18 | BLU | 2 | P3-11 | SOLD | 12 | P1-13 | 3 | -15V |
| 8 | 18 | BRN | 8 | P3-1 | SOLD | 11 | P2-2 | 3 | LT _c |
| 7 | 18 | VIO | 6 | P3-3 | SOLD | 9 | P2-3 | 3 | D _c Lo |
| 7 | 18 | TWP YEL | 7 | P3-2 | SOLD | 10 | P2-4 | 3 | A _c Lo |
| 11 | 22 | - | - | P3-13 | SOLD | - | P3-14 | SOLD | D _c Lo |
| 11 | 22 | - | - | P3-15 | SOLD | - | P3-16 | SOLD | A _c Lo |

- NOTES:**
- USE TIE WRAPS (X) ITEM #4 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
 - DOT (•) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.
 - USE CONN BRKT C-MD-930576-H5-0 MOUNT WITH WOOD SCREWS. USE MATING CONN 1209350-15.
 - USE CONN BRKT C-MD-930576-H6-0 MOUNT WITH WOOD SCREWS. USE MATING CONN 1209350-06.
 - USE CONN. HOLD DOWN B-MD-930576-00 WITH PLATE B-MD-930576-0-1. USE TAPE DEG #9008734 & CONN H307 DEC # (1209123) REMOVE PINS & FLANGES AS SHOWN IN DETAIL "A". MOUNT WITH WOOD SCREWS.



| | | |
|-----|----|--------|
| BRN | 01 | 5009 |
| RED | 02 | 060010 |
| YEL | 03 | 060010 |
| BLU | 03 | 067011 |
| VIO | 03 | 067011 |
| BLK | 04 | 060012 |
| GRY | 04 | 060012 |
| BLK | 04 | 060012 |

| SYM | QTY | DESCRIPTION | PART NO. | REV. |
|-----|-----|----------------------|------------|------|
| N/R | | BUSS WIRE #22 AWG | 9107560-01 | 11 |
| I | | POWER CONN | 6772 | 10 |
| A/R | | WIRE #4 AWG GRN | 9107370-88 | 9 |
| A/R | | WIRE #18 AWG BRN | 9107360-11 | 8 |
| A/R | | WIRE #18 TWP YEL/VIO | 9107430-47 | 7 |
| A/R | | WIRE #14 TWP BLK/BLU | 9107440-06 | 6 |
| A/R | | WIRE #14 TWP BLK/RED | 9107440-02 | 5 |
| X | | A/R WRAP TIE | 90071031 | 4 |
| B | | DIN, MALE | 1209378-00 | 3 |
| B | | HOUSING CONN. 15 PIN | 1209351-15 | 2 |
| B | | HOUSING CONN. 6 PIN | 1209351-06 | 2 |

| | | | |
|--|------------------|------------------|------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES | DATE 10/15/72 | DATE 10/15/72 | DATE 10/15/72 |
| DECIMALS .010 ANGLES 1/2° | DATE 10/15/72 | DATE 10/15/72 | DATE 10/15/72 |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | DATE 10/15/72 | DATE 10/15/72 | DATE 10/15/72 |
| MATERIAL SEE PARTS LIST | DATE 10/15/72 | DATE 10/15/72 | DATE 10/15/72 |
| FINISH | DATE 10/15/72 | DATE 10/15/72 | DATE 10/15/72 |

SCALE 1/1

SHEET 1 OF 1

7009562-0-0

**6772 SYSTEM
UNIT HARNESS**

EIA 7009562-0-0

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

QUANTITY / VARIATION

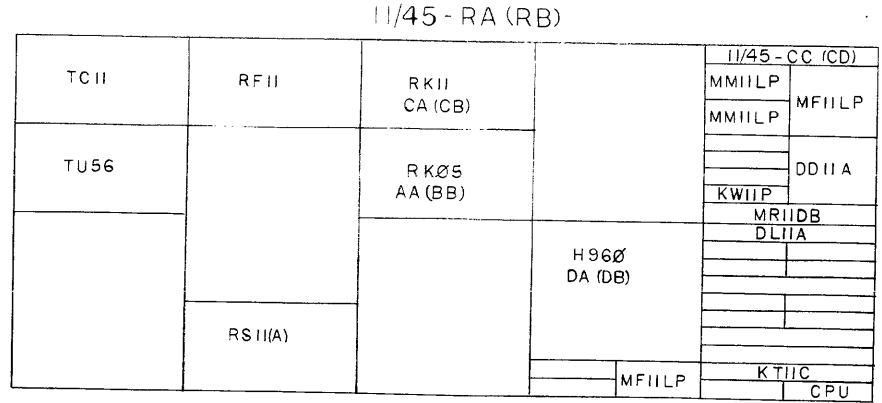
| | | |
|---------------------------------|-------------------------------|---------------------|
| MADE BY <i>Q. Horner</i> | CHECKED <i>J. Royl</i> | SECTION |
| DATE 6-15-72 | DATE 6-15-72 | |
| ENG <i>J. Royl</i> | PROD <i>Q. Horner</i> | ISSUED SECT. |
| DATE 6/20/72 | DATE 6-20-72 | |

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | Basic | QUANTITY / VARIATION | | | | KIT CHECK | BY | DATE | INSTALLATION CHECK | BY | DATE |
|----------|------------------------|---|-------|----------------------|--|--|--|-----------|----|------|--------------------|----|------|
| | | | | | | | | | | | | | |
| | Lib Kit 11-Bas 45-B-K | System Software Kit | 1 | | | | | | | | | | |
| | Dec 11-H45B-D | 11/45 Systems and installation Manual | 1 | | | | | | | | | | |
| | 112-01071-1854-D-09-25 | 11 Peripherals and interfacing Handbook | 1 | | | | | | | | | | |
| | 112-01071-1876-D-09 | 11/45 Processor Handbook | 1 | | | | | | | | | | |
| | Dec 11-HKBA-D | KB11 Maintenance Manual | 1 | | | | | | | | | | |
| | B-DD-11/45-0 | PDP-11/45 Systems Eng. Drawings | 1 | | | | | | | | | | |
| | | Dec Supplies List | 1 | | | | | | | | | | |
| | | Log Book | 1 | | | | | | | | | | |
| | | PDP-11 Instruction Card | 1 | | | | | | | | | | |
| | | H960C Cab Filter | 1 | | | | | | | | | | |
| | 9007221 | AGC 5 A Fuse | 5 | | | | | | | | | | |
| | 9007226 | AGC 15A Fuse | 5 | | | | | | | | | | |
| | 9009039 | Fuse 2/10A SB | 5 | | | | | | | | | | |
| | | Key on off Switch | 2 | | | | | | | | | | |
| | 7008855 | POWER CABLE, SYSTEM UNIT | 3 | | | | | | | | | | |

| | | | | | |
|-----------------------------------|------------------|--------------------------|-------------------------------|------------------|------------------------------|
| TITLE Central Processor | ASSY. NO. | SIZE CODE A AL | NUMBER 11/45 - 0018 | REV. A | ECO NO 11/45-00038 |
| SHEET OF | | DIST. | | | |

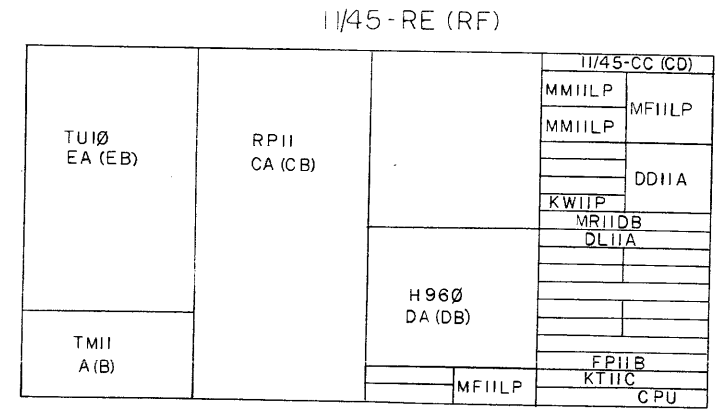
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1973

- NOTES:
1. SYSTEMS IN () ARE 230V 50 HZ VFRS CNS
 2. DLIIA SPEED GROUP 3 (300 BAUD ONE STOP BITS, NO PARITY, 8 BITS)
 3. DLIIA MUST BE SET FOR 150 BAUD TO RUN DIAGNOSTICS.



SOFTWARE QR43Ø-AC

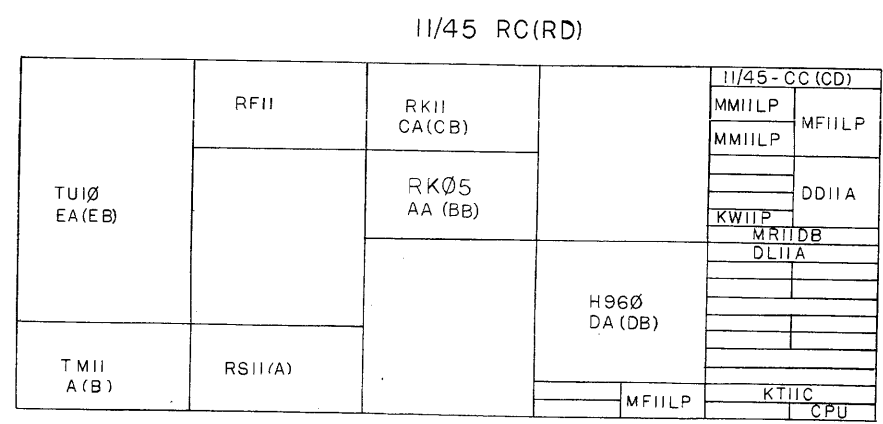
LA3Ø
CA (CD)



SOFTWARE QR43Ø-AD

RPØ3
AS (BS)

LA3Ø
CA (CD)



SOFTWARE QR43Ø-AD

LA3Ø
CA (CD)

REVISIONS

| CHK | CHANGE NO | REV |
|-----|-------------------|-----|
| 1 | 11/45-0004B | A |
| 2 | REVISED & REDRAWN | |
| 3 | B. FITZGERALD | |
| 4 | 11/45-0005 | B |
| 5 | MINOR | |

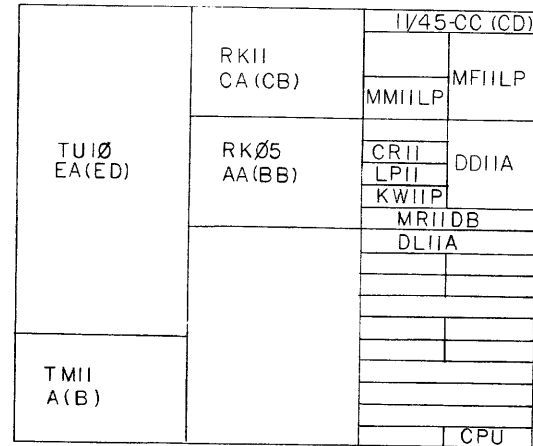
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|---|-----------------------|-------------------|---|----------|
| FIRST USED ON OPTION/MODEL PDP11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN. B CRAMM | DATE 11-6-72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS | CHK'D J BAILEY | DATE 11-10-72 | TITLE TIME SHARING SYSTEMS | |
| ANGLES | ENG. SWANSON | DATE 11-3-72 | REV. B | |
| XXX = .005 XX = .02 X = .1 | PROJ. ENG. SWANSON | DATE 11-3-72 | NUMBER 11/45-0-4 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | PROD. HILGENDORF | DATE | SHEET 1 OF 5 | |
| MATERIAL | NEXT HIGHER ASSY. | SCALE | DIST. | |
| FINISH | B-DD-11/45-Ø | SIZE CODE D AR | REV. B | |

DEC FORM NO. 178 (1964)

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7-0 Still 2
REV B

11/45-PA (PB)



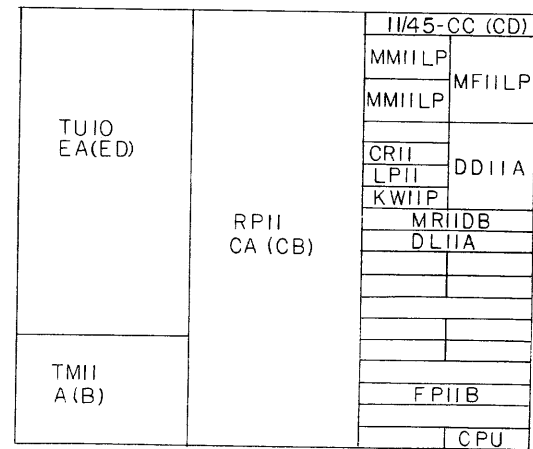
SOFTWARE QJ250-AD

CR11(A)
300
CPM

LP11
JA(JB)

LA30
CA(CD)

11/45-PC (PD)



SOFTWARE QJ250-AD


RP03
AS(BS)

CR11(A)
300
CPM

LP11
JA(JB)

LA30
CA(CD)

| | |
|----------------------|-----|
| BRUNING 40-107 15986 | REV |
| REVISIONS | |
| CHANGE NO. | |
| CHK | |

| | | | | |
|--|------------------------|-----------------------|--|--|
| FIRST USED ON OPTION/MODEL PDP11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. B. CRAMM | DATE 11-6-72 |  digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small> | |
| DECIMALS | CHK'D. J. BAILEY | DATE 11-10-72 | | |
| ANGLES | ENG. SWANSON | DATE 11-13-72 | | |
| xxx = .005 .xx = .02 .x = .1 | ±0° 30' | PROJ. ENG. SWANSON | DATE 11-13-72 | TITLE BATCH PROCESSING SYSTEMS |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | PROD. R. HILGENDORF | DATE | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
| FINISH | B-DD-11/45-0 | DAR | 11/45-0-4 | B |
| SCALE | SHEET 2 OF 5 | DIST. | | |

DFC FORM NO. DRP 100-A

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1373

REV 2
SIZE CODE DAR
NUMBER 11/45-0-4

11/45 - MA (MB)

| | | | |
|------|-----------------|---------------|---------|
| TCII | RKII CA (CB) | 11/45-CC (CD) | |
| | | | |
| TU56 | RK05 AA (BB) | MMIILP | MFIIILP |
| | | MMIILP | |
| | | MRIIDB | DLIIA |
| | | | |
| | | | |
| | | | |
| | | | |
| | | KTIIIC | |
| | | KWIIL | CPU |

SOFTWARE QJ580-AC

LA 30
CA (CD)

11/45 - MH (MJ)

| | | | | |
|-----------------|-----------------|-----------------|---------------|---------|
| TUI0 EA (ED) | RKII CA (CB) | H960 DA (DB) | 11/45-CC (CD) | |
| | | | | |
| RK05 AA (BB) | | | MMIILP | MFIIILP |
| | | | MMIILP | |
| | | | CRII LPII | DDIIA |
| | | | MRIIDB | DLIIA |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | KTIIIC | |
| | | | KWIIL | CPU |
| TMII A (B) | | | | |

SOFTWARE QJ 580 - AD

CRII(A)
300
CPM

LPII
JA(JB)

LA 30
CA (CD)

11/45 - MC (MD)

| | | | |
|-----------------|----------|---------------|---------|
| TUI0 EA (ED) | RFII | 11/45-CC (CD) | |
| | | | |
| TMII A (B) | RSII (A) | MMIILP | MFIIILP |
| | | MMIILP | |
| | | MRIIDB | DLIIA |
| | | | |
| | | | |
| | | | |
| | | | |
| | | KTIIIC | |
| | | KWIIL | CPU |

SOFTWARE QJ580-AD

LA 30
CA (CD)

| | | | | |
|---|-----------------------------------|---------------------|---------------------|-------------------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | CHK'D J. BAILEY | DATE 11-10-72 | TITLE REAL TIME SYSTEMS |
| DECIMALS XXX - .005 XX - .02 X - .1 | ANGLES ±0° 30' | ENG SWANSON | DATE 11-13-72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | | PROD. HILGENDORF | DATE 11-13-72 | |
| MATERIAL -- | NEXT HIGHER ASSY. B-DD-11/45-0 | SIZE CODE DAR | NUMBER 11/45-0-4 | REV. B |
| FINISH -- | SCALE SHEET 3 OF 5 | DIST. | | |

| | |
|-----------|--|
| REV | |
| CHG | |
| CHK | |
| REVISIONS | |
| CHANGE NO | |

DFC FORM NO
1373-100-1

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REV B
NUMBER 11/45-0-4
SIZE CODE DAR 2

11/45 - DA (DB)

| | | | |
|------|---------|-----------------|---------|
| TCII | RFII | 11/45-CC (CD) | |
| TU56 | | MMIILP | MFIIILP |
| | | MRIIDB DLIIA | |
| | RSII(A) | | |
| | | | |
| | | | |
| | | | CPU |

SOFTWARE QJ220-AC

LA 30
CA (CD)

11/45 - DU (DV)

| | | | |
|-----------------|----------------|---------------|-----------------|
| TUI0 EA (ED) | RKII CA(CB) | 11/45-CC (CD) | |
| | RK05 AA(BB) | MMIILP | MFIIILP |
| | | | MRIIDB DLIIA |
| | | | |
| | | | |
| | | | CPU |
| TMII A(B) | | | |

SOFTWARE QJ220-AD


LA 30
CA (CD)

11/45 - DS (DT)

| | | | |
|------|----------------|-----------------|---------|
| TCII | RKII CA(CB) | 11/45-CC (CD) | |
| TU56 | RK05 AA(BB) | MMIILP | MFIIILP |
| | | MRIIDB DLIIA | |
| | | | |
| | | | |
| | | | |
| | | | CPU |

SOFTWARE QJ220-AC

LA 30
CA (CD)

| | | | | |
|--|-----------------------|------------------|---|---------------------|
| FIRST USED ON OPTION/MODEL PDP 11/45 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. BORAMM | DATE 11-6-72 |  digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE INTERACTIVE DISK SYSTEMS | |
| DECIMALS | CHK'D. J. BAILEY | DATE 11-10-72 | | |
| ANGLES | ENG. SWANSON | DATE 11-13-72 | | |
| .XXX = .005 .XX = .02 .X = .1 | PROJ. ENG. SWANSON | DATE 11-13-72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | PROD. HILGENDREF | DATE | MATERIAL NEXT HIGHER ASSY. B-DD-11/45-0 SCALE SHEET 4 OF 5 | |
| FINISH | | | SIZE CODE DAR | NUMBER 11/45-0-4 |
| | | | REV. B | |

| | |
|----------------------|------|
| BRUNING 40-107 15868 | REV. |
| REVISIONS | |
| CHANGE NO. | |
| CHK | |

REV B
NUMBER 11/45-0-4
SIZE CODE DAR

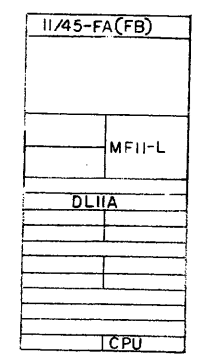
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1973

2

D
C
B
A

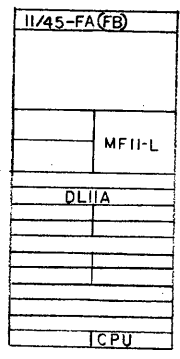
D
C
B
A

11/45-FC (FD)



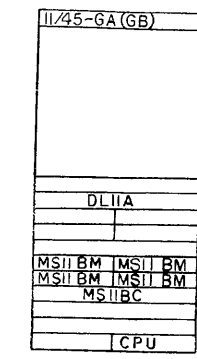
LA 30
CA (CD)

11/45-FE (FF)



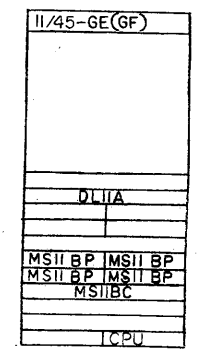
VT05B
AA(AD)

11/45-GK (GL)



LA 30
CA (CD)

11/45-GP (GR)



LA 30
CA (CD)

| | |
|-----------|--|
| REV | |
| CHANGE NO | |
| CHK | |

REV
NUMBER
D AR 11/45-0-4

| | | | | |
|---|-----------------|------------------------------|--|----------------------|
| FIRST USED ON OPTION/MODEL PDP-11 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN B. CRAMM | DATE 2-22-73 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | |
| DECIMALS | ANGLES | CHK'D. <i>[Signature]</i> | DATE 3-30-73 | TITLE OEM SYSTEMS |
| .XXX = .005 .XX = .02 .X = .1 | ±0° 30' | ENG | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | PROJ. ENG. | DATE | | |
| MATERIAL | PROD. | DATE | | |
| NEXT HIGHER ASSY. | | | | |
| FINISH | B-DD-11/45-0 | SCALE | SIZE CODE D AR | NUMBER 11/45-0-4 |
| | SHEET 5 OF 5 | DIST. | | REV. B |

DEC FORM NO. 140 190-1

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| ITEM NO. | DWG. NO. / PART NO. | DESCRIPTION | QUANTITY / VARIATION | | | | | | | | | | | | | | | | | | | | | | | |
|----------|---------------------|------------------------------------|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| | | | 11/45-RA | 11/45-RE | 11/45-RC | 11/45-RI | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | 11/45-RE | |
| 1 | C-PL-11/45-CC | BASIC ASS Y 115V 60 HZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | C-PL-11/45-CD | BASIC ASS Y 230V 50 HZ | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | B-DD-KT11-C | MEMORY MANAGEMENT | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 4 | B-DD-FP11-B | FLOATING POINT PROCESSOR | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | B-DD-KW11-L | LINE FREQUENCY CLOCK | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | B-DD-KW11-P | PROGRAMMABLE CLOCK | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | B-DD-MF11-LP | 8K PARITY CORE MEM. AND CONTROL | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 8 | B-DD-MM11-LP | 8K PARITY CORE MEM. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 9 | B-DD-MR11-DB | MULTI-DEVICE BOOTSTRAP LOADER | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 10 | A-ML-RF11-Ø | DISK CONTROL | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 11 | A-ML-RK11-CA | DISK CONTROL 115V 60 HZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | A-ML-RF11-CB | DISK CONTROL 230V 50 HZ | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 13 | B-DD-RP11-CA | DISK CONTROL 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | B-DD-RP11-CB | DISK CONTROL 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | A-ML-RS11-Ø | DISK DRIVE 115V 60 HZ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 16 | A-ML-RS11-A | DISK DRIVE 230V 50 HZ | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 17 | B-DD-RKØ5-AA | DISK DRIVE 115V 60 HZ | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | B-DD-RKØ5-BB | DISK DRIVE 230V 50 HZ | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 19 | A-PL-RPØ3-AS | DISK DRIVE 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | A-PL-RPØ3-BS | DISK DRIVE 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | A-ML-TC11-Ø | MAGNETIC TAPE CONTROL | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 22 | A-ML-TM11-A | MAGNETIC TAPE CONTROL 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | A-ML-TM11-B | MAGNETIC TAPE CONTROL 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | A-ML-TU56-Ø | MAGNETIC TAPE TRANSPORT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 25 | C-PL-TU1Ø-EA | MAGNETIC TAPE TRANSPORT 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | C-PL-TU1Ø-ED | MAGNETIC TAPE TRANSPORT 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | A-PL-LP11-JA | LINE PRINTER & CONTROL 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | A-PL-LP11-JB | LINE PRINTER & CONTROL 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | A-PL-LP11-RA | LINE PRINTER & CONTROL 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | A-PL-LP11-RB | LINE PRINTER & CONTROL 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | A-PL-CR11 | CARD READER & CONTROL 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | A-PL-CR11-A | CARD READER & CONTROL 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | B-DD-DL11-A | TERMINAL CONTROL | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | C-PL-LA3Ø-CA | SERIAL DEC WRITER 115V 60 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | C-PL-LA3Ø-CD | SERIAL DEC WRITER 230V 50 HZ | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | D-UA-H96Ø-DA | EXTENSION MOUNTING BOX 115V 60 HZ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 37 | D-UA-H96Ø-DB | EXTENSION MOUNTING BOX 230V 50 HZ | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 38 | A-PL-DD11-A | SYSTEM UNIT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 39 | QR43Ø-AC | TIMESHARING SOFTWARE | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 40 | QR43Ø-AD | TIMESHARING SOFTWARE | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | QJ25Ø-AD | BATCH SOFTWARE | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | QJ58Ø-AC | REAL-TIME SOFTWARE | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | QJ58Ø-AD | REAL-TIME SOFTWARE | | | | | | | | | | | | | | | | | | | | | | | | |

| REV. | CHANGE NO. | DATE | BY | DESCRIPTION |
|------|-------------|-------------|---------------|-------------------|
| 1 | 11/45-00043 | 11/45-00048 | B. FITZGERALD | REVISED & REDRAWN |
| 2 | 11/45-00048 | 11/45-00048 | B. FITZGERALD | REVISED & REDRAWN |
| 3 | 11/45-00048 | 11/45-00048 | B. FITZGERALD | REVISED & REDRAWN |
| 4 | 11/45-00048 | 11/45-00048 | B. FITZGERALD | REVISED & REDRAWN |

FIRST USED ON OPTION/MODEL
11/45

| | | |
|--|-----------------------------------|------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' | DRN. BEASLEY 12/19/72 | DATE 12/19/72 |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' | CHK'D. L. GILBERT | DATE 1/2/73 |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' | ENG. J. SWANSON | DATE 1/11/73 |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' | PROJ. ENG. J. SWANSON | DATE 1/11/73 |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' | PROD. A. ZINS | DATE 1/11/73 |
| MATERIAL +-----+ | NEXT HIGHER ASSY. B-DD-11/45-0 | |
| FINISH +-----+ | SCALE +-----+ | |

| | |
|---|---------------------|
| digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| TITLE ARRANGEMENT PARTS LIST | |
| SIZE CODE C PL | NUMBER 11/45-0-4 |
| DIST. | REV. B |

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET [] [] [] []

SEQUENCE

SEQUENCE

PRINT SET #1

DRAWING DIRECTORY B-DD-DL11-~~0~~
 ASYNCHRONOUS LINE INTERFACE C-UA-DL11-~~0~~
 ASYNCHRONOUS LINE INTERFACE (PL) A-PL-DL11-~~0~~
 ASYNCHRONOUS LINE INTERFACE E-CS-M7800-~~0-0~~ *YH*
 CABLE ASSEMBLY (KL8/E) D-1A-7008360-~~0-0~~
 SOFTWARE LIST A-SL-DL11-~~0-4~~
 ACCESSORY LIST A-AL-DL11-~~0-5~~
 INSTALLATION PROCEDURE A-SP-DL11-~~0-2~~

PRINT SET #2

DRAWING DIRECTORY B-DD-DL11-~~0~~
 ASYNCHRONOUS LINE INTERFACE C-UA-DL11-~~0~~
 ASYNCHRONOUS LINE INTERFACE (PL) A-PL-DL11-~~0~~
 ASYNCHRONOUS LINE INTERFACE E-CS-M7800-~~0-1~~
 CABLE, MODEM BC05C D-UA-BC05C-~~0-0~~
 FILTER NETWORK B-CS-GE000-~~0-1~~
 MODEM TEST CONN D-CS-H315-~~0-1~~
 SOFTWARE LIST A-SL-DL11-~~0-4~~
 ACCESSORY LIST A-AL-DL11-~~0-5~~
 INSTALLATION PROCEDURE A-SP-DL11-~~0-2~~

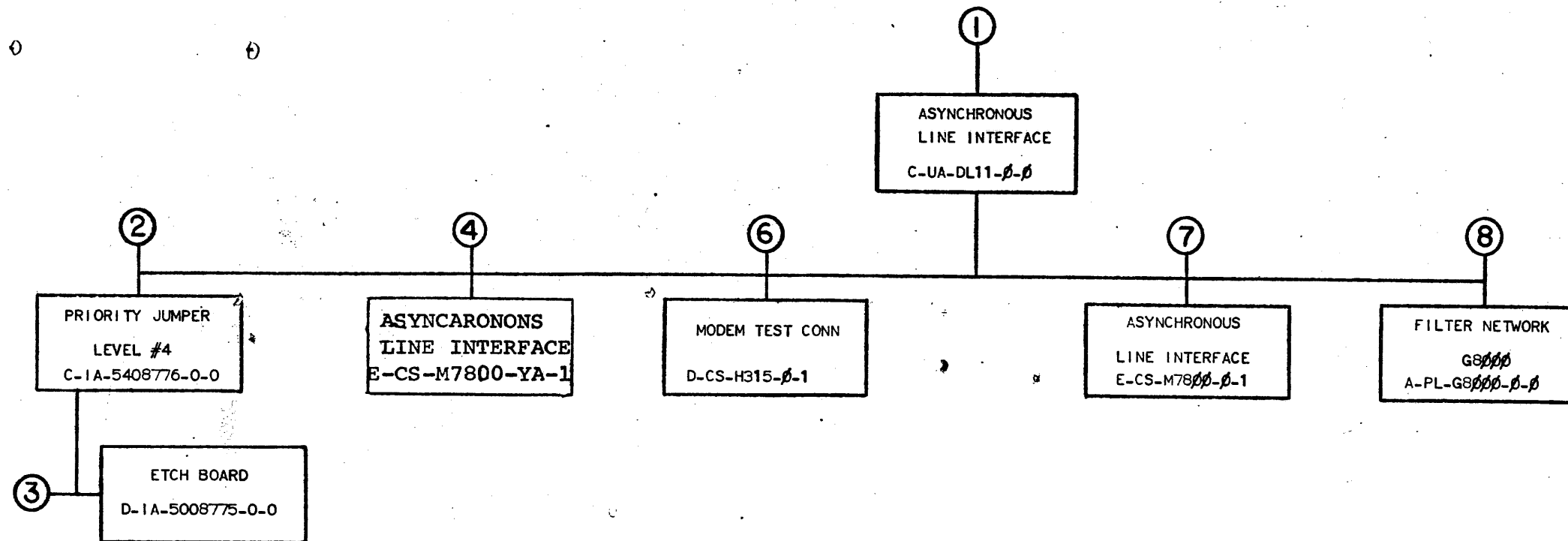
PRINT SET #3
 DRAWING DIRECTORY B-DD-DL11-0
 ASYNCHRONOUS LINE INTERFACE C-UA-DL11-0-0
 ASYNCHRONOUS LINE INTERFACE (PL) A-PL-DL11-0-0
 ASYNCHRONOUS LINE INTERFACE E-CS-M7800-0-1
 CABLE, MODEM BC05C D-UA-BC05C-0-0
 CABLE ASSEMBLY (KL8/E) D-1A-7008360-0-0
 MODEM TEST CONN. D-CS-H315-0-1
 INSTALLATION PROCEDURE A-SP-DL11-0-2

UNIT VARIATIONS

| VARIATION | TITLE | PRINT SET TYPE | | | |
|-----------|-------------------------------------|----------------|--------|--|--|
| | | DL11-1 | DL11-2 | | |
| DL11-A | ASYNCH LINE INTERFACE, CURRENT LOOP | 1 | 0 | | |
| DL11-B | ASYNCH LINE INTERFACE, EIA | 0 | 1 | | |
| DL11-C | ASYNCH LINE INTERFACE, CURRENT LOOP | 1 | 0 | | |
| DL11-D | ASYNCH LINE INTERFACE, EIA | 0 | 1 | | |
| DL11-E | ASYNCH LINE INTERFACE, DATA SET | 0 | 1 | | |
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| REVISIONS | CHG. NO. | REV |
|---------------------|-----------------|-----|
| <i>P.H.</i> | DL11-00001 | A |
| <i>P. E. Janson</i> | <i>7-17-72</i> | |
| <i>P. E. Janson</i> | <i>11-30-72</i> | B |
| <i>P. E. Janson</i> | <i>12-5-72</i> | |
| <i>P. E. Janson</i> | <i>12-20-72</i> | C |
| <i>P. E. Janson</i> | <i>1-27-72</i> | |
| <i>P. E. Janson</i> | <i>3-28-72</i> | D |
| <i>P. E. Janson</i> | <i>4-6-73</i> | |
| <i>P. H.</i> | DL11-00005 | E |
| <i>B. Blodgett</i> | <i>7-31-73</i> | |
| <i>L. CONDON</i> | | |
| <i>P. E. Janson</i> | <i>8-18-73</i> | |
| <i>P. E. Janson</i> | <i>9-21-73</i> | F |
| <i>CONDON</i> | | |
| <i>P. E. Janson</i> | <i>10-17-73</i> | |
| <i>P. E. Janson</i> | <i>11-14-73</i> | H |
| <i>CONDON</i> | | |
| <i>P. E. Janson</i> | <i>8-14-74</i> | |
| <i>CONDON</i> | | |
| <i>P. E. Janson</i> | <i>8/18/74</i> | |

| | | | | | | |
|----------------------|--------------------------------|---------------------|---|-------------------|------------------|----------|
| USED ON OPTION/MODEL | DRN. <i>M. Pierce</i> | DATE <i>4-28-72</i> | TITLE ASYNCHRONOUS LINE INTERFACE | SIZE CODE B DD | NUMBER DL11-0 | REV H |
| | CHK'D <i>K. Cook</i> | DATE <i>5/9/72</i> | | | | |
| | PRO LENG <i>P. E. Janson</i> | DATE <i>5/11/72</i> | | | | |
| | PROD <i>P. E. Janson</i> | DATE <i>5-15-72</i> | | | | |
| | FIELD SRV. <i>P. E. Janson</i> | DATE <i>6/15/72</i> | | | | |
| SHEET 1 OF 3 | DIST G | | | | | |

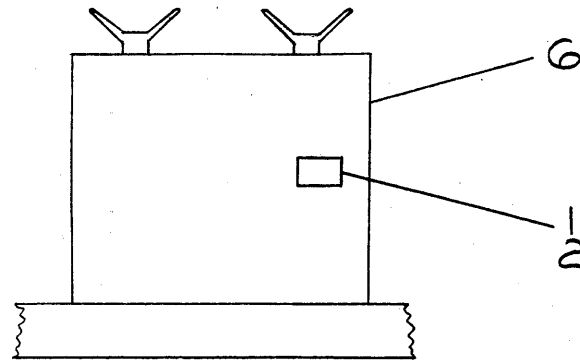


| | | | | | |
|-------|--------------------------------|--------------|-------------------|--------------------|----------|
| TITLE | ASYNCHRONOUS LINE INTERFACE | SHEET 2 OF 3 | SIZE CODE B DD | NUMBER DL11 - Ø | REV H |
|-------|--------------------------------|--------------|-------------------|--------------------|----------|

| CUSTOMER PRINT SET | | | | ELECTRICAL | | | | | CUSTOMER PRINT SET | | | | MECHANICAL | | | | | | | | |
|--------------------|--------|--------|--|------------|----------|--------------------------------------|-----|-----------|----------------------------------|------------|--------|--------|------------|--|-----------|----------|--------------------------------------|-----|-----------|----------------------------------|------------|
| DL11-1 | DL11-2 | DL11-3 | | DEPOT SET | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. | DL11-1 | DL11-2 | DL11-3 | | DEPOT SET | FIND NO. | DRAWING NO. | REV | NO OF SHT | DESCRIPTION | OPTION NO. |
| X | X | X | | | 1. | C-UA-DL11- β - β | D | 1 | ASYNCHRONOUS LINE INTERFACE | | | | | | | 1. | C-UA-DL11- β - β | D | 1 | ASYNCHRONOUS LINE INTERFACE | |
| X | X | X | | | | A-PL-DL11- β - β | D | 1 | ASYNCHRONOUS LINE INTERFACE (PL) | | | | | | | | A-PL-DL11- β - β | D | 1 | ASYNCHRONOUS LINE INTERFACE (PL) | |
| X | | X | | | | D-UA-BC ϕ 5C- β - β | # | 1 | CABEE, MODEM, BC ϕ 5C | | | | | | | | D-UA-BC ϕ 5C- β - β | | 1 | CABLE, MODEM BC ϕ 5C | |
| | | | | | | D-1A-7008360-0-0 | # | 1 | CABLE, ASSEMBLY (KLB/E) | | | | | | | | D-1A-7008360-0-0 | | 1 | CABLE ASSEMBLY (KLB/E) | |
| X | X | X | | | | A-SP-DL11- β -1 | * | 11 | ENGINEERING SPECIFICATION | | | | | | | | | | | | |
| | | | | | | A-SP-DL11- β -2 | E | 9 | INSTALLATION PROCEDURE | | | | | | | | | | | | |
| | | | | | | A-SP-DL11- β -3 | A | 7 | TEST PROCEDURE | | | | | | | | | | | | |
| X | X | | | | | A-SL-DL11- β -4 | * | 1 | SOFTWARE LIST | | | | | | | | | | | | |
| X | X | | | | | A-AL-DL11- β -5 | C | 1 | ACCESSORY LIST | | | | | | | | | | | | |
| | | | | | 2. | C-1A-5408776-0-0 | | 1 | PRIORITY JUMPER LEVEL #4 | | | | | | | 2. | C-1A-5408776-0-0 | | 1 | PRIORITY JUMPER LEVEL #4 | |
| | | | | | | B-CS-5408776-0-1 | | 1 | CIRCUIT SCHEMATIC | | | | | | | | K-CO-5408776-0-4 | | 1 | X-Y COORDINATE HOLE LOC | |
| | | | | | | K-CO-5408776-0-4 | | 1 | X-Y COORDINATE HOLE LOC | | | | | | | | B-MH-5408776-0-6 | | 1 | ASSY/DRILLING HOLE LAYOUT | |
| | | | | | | B-MH-5408776-0-6 | | 1 | MODULE ECO HISTORY | | | | | | | | | | | | |
| | | | | | 3. | C-AH-5408776-0-5 | | 1 | ASSY/DRILLING HOLE LAYOUT | | | | | | | 3. | D-1A-5008775-0-0 | | 1 | ETCH BOARD | |
| | | | | | | | | | | | | | | | | | C-AH-5408776-0-5 | | 1 | ASSY/DRILLING HOLE LAYOUT | |
| X | | | | | 4 | E-CS-M7800-YA-1 | # | 6 | ASYNCHRONOUS LINE INTERFACE | | | | | | | | | | | | |
| | | | | | | K-CO-M7800-YA-4 | | 1 | X-Y COORDINATE HOLE LOCATION | | | | | | | | | | | | |
| | | | | | | D-AH-M7800-YA-5 | | 1 | ASSY DRILLING HOLE LAYOUT | | | | | | | | | | | | |
| | | | | | | B-MH-M7800-YA-6 | | 1 | MODULE ECO HISTORY | | | | | | | | | | | | |
| X | X | | | | 6. | D-CS-H315- β -1 | # | 1 | MODEM TEST CONN | | | | | | | 6. | D-CS-H315- β -1 | | 1 | MODEM TEST CONN | |
| | | | | | | K-CO-H315- β -4 | | 1 | X-Y COORDINATE HOLE LOC | | | | | | | | K-CO-H315- β -4 | | 1 | X-Y COORDINATE HOLE LOC | |
| | | | | | | D-AH-H315- β -5 | | 1 | ASSY DRILLING HOLE LAYOUT | | | | | | | | C-AH-H315- β -5 | | 1 | ASSY/DRILLING HOLE LAYOUT | |
| | | | | | | B-MH-H315- β -6 | | 1 | MODULE ECO HISTORY | | | | | | | | B-MH-H315- β -6 | | 1 | MODULE ECO HISTORY | |
| X | X | X | | | 7. | E-CS-M7800- β -1 | # | 7 | ASYNCHRONOUS LINE INTERFACE | | | | | | | 7. | E-CS-M7800- β -1 | | 7 | ASYNCHRONOUS LINE INTERFACE | |
| | | | | | | K-CO-M7800- β -4 | | 1 | X-Y COORDINATE HOLE LOC | | | | | | | | K-CO-M7800- β -4 | | 1 | X-Y COORDINATE HOLE LOC | |
| | | | | | | D-AH-M7800- β -5 | | 1 | ASSY/DRILLING HOLE LAYOUT | | | | | | | | D-AH-M7800- β -5 | | 1 | ASSY/DRILLING HOLE LAYOUT | |
| | | | | | | B-MH-M7800- β -6 | | 1 | MODULE ECO HISTORY | | | | | | | | B-MH-M7800- β -6 | | 1 | MODULE ECO HISTORY | |
| X | | | | | 8. | A-PL-G8000- β - β | | 1 | FILTER NETWORK | | | | | | | 8. | A-PL-G8000- β - β | | 1 | FILTER NETWORK | |
| | | | | | | B-CS-G8000- β -1 | # | 1 | CIRCUIT SCHEMATIC | | | | | | | | K-CO-G8000- β -4 | | 1 | X-Y COORDINATE HOLE LOC | |
| | | | | | | K-CO-G8000- β -4 | | 1 | X-Y COORDINATE HOLE LOC | | | | | | | | C-AH-G8000- β -5 | | 1 | ASSY/DRILLING HOLE LAYOUT | |
| | | | | | | C-AH-G8000- β -5 | | 1 | ASSY/DRILLING HOLE LAYOUT | | | | | | | | B-MH-G8000- β -6 | | 1 | MODULE ECO HISTORY | |
| | | | | | | B-MH-G8000- β -6 | | 1 | MODULE ECO HISTORY | | | | | | | | | | | | |

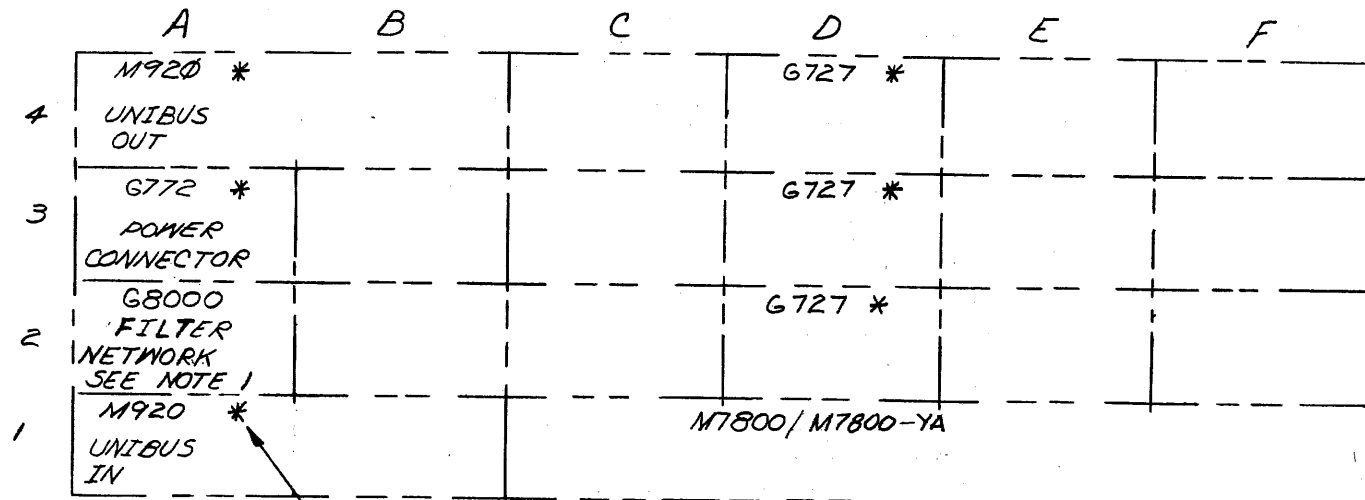
| | | | | | | |
|-------|-----------------------------|--------------|------|------|-------------------|-----|
| TITLE | ASYNCHRONOUS LINE INTERFACE | SHEET 3 OF 3 | SIZE | CODE | NUMBER | REV |
| | | | B | DD | DL11- \emptyset | U |

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1972



NOTES:

- G 8000 IS REQUIRED ONLY IN PDP 11 SYSTEMS WHERE +15V IS NOT AVAILABLE. THE INSTALLATION REQUIRES 2 WIRES TO BE ADDED.
A03V2-A02V2
A02N2-CXXU1
WHERE (XX) IS THE SLOT NUMBER CONTAINING THE DLII.
- ITEMS INDICATED WITH ASTERICK (*) ARE SHOWN FOR REFERENCE ONLY AND ARE NOT PART OF THIS UNIT.



DD11-A*

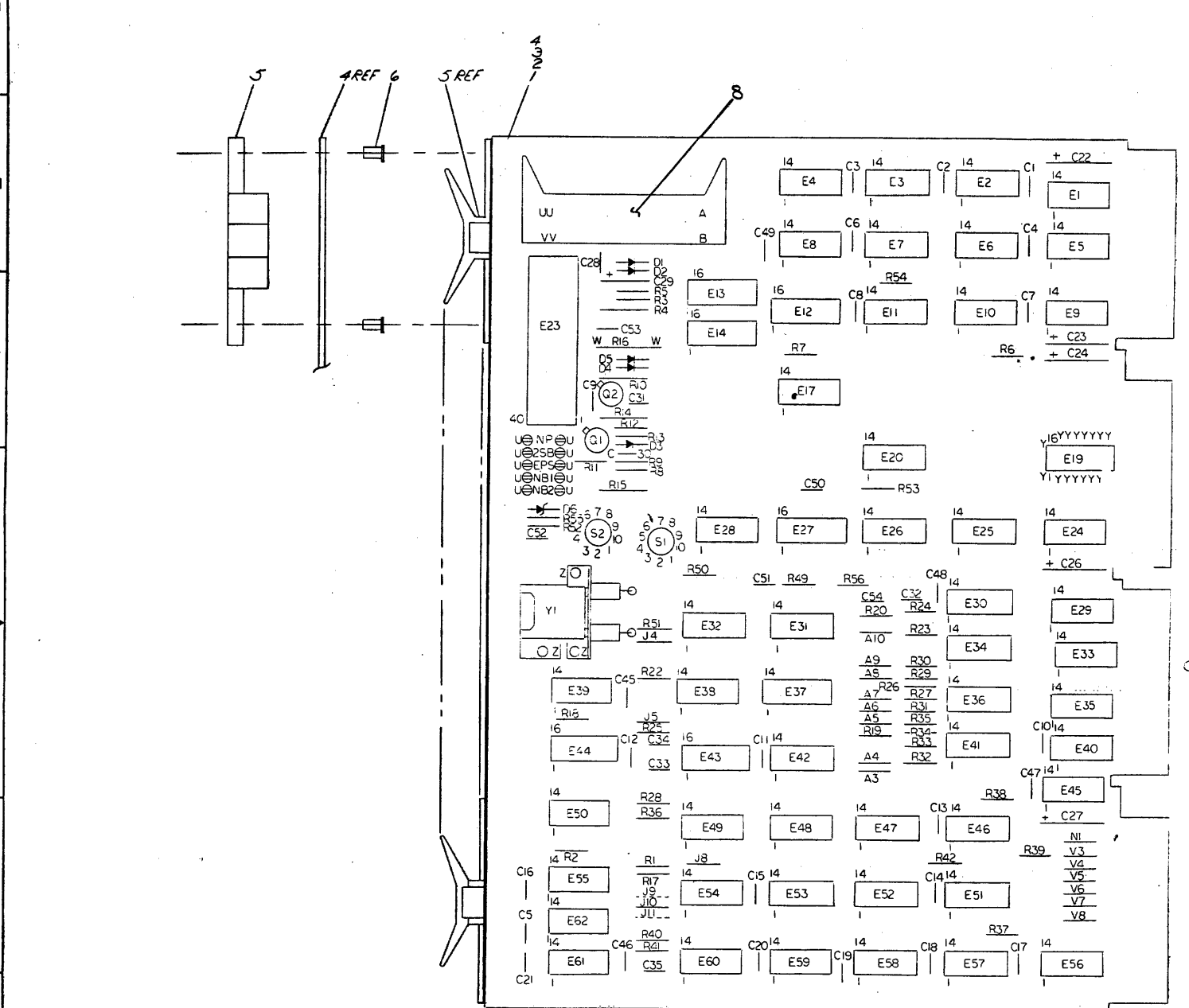
SEE NOTE 2

| REV. | CHANGE NO. | CHK | DATE |
|------|------------|-------------|---------|
| A | DLII-00001 | P.M. | 2-18-72 |
| B | DLII-00002 | R.E. Janson | 7-19-72 |
| C | DLII-00005 | P.M. | 5-11-72 |
| D | DLII-00006 | L. Condon | 1-19-73 |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------------------|--------------|---|----------|
| PDP-11 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. M. Rice | DATE 3/18/72 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS .XXX = .005 .XX = .02 .X = .1 | CHK'D. J. F. Jansen | DATE 4-29-72 | TITLE | |
| ANGLES ±0° 30' | ENG. P.E. Janson | DATE 5-11-72 | ASYNCHRONOUS LINE INTERFACE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ | PROD. J. M. Jansen | DATE 5-15-72 | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE | NUMBER | REV. |
| + + + | B-00-DLII-0 | CUA | DLII-0-0 | D |
| FINISH | SCALE NONE | SHEET | OF | |
| + + + | | | | |

| DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST | | | | | QUANTITY / VARIATION | | | | | | | | | | | | | | | |
|--|--------------------|---|--|--------------|----------------------|----------|--------|--------|-----------|------------|--|--|--|--|--|--|--|--|--|--|
| MADE BY M. PIERCE | | CHECKED J. FERGUSON | | SECTION | DL11-A | DL11-B | DL11-C | DL11-D | DL11-E | | | | | | | | | | | |
| DATE 4/27/72 | | DATE 4/27/72 | | 1 | | | | | | | | | | | | | | | | |
| ENG P. E. Jamson | | PROD J. Mc Coy | | ISSUED SECT. | | | | | | | | | | | | | | | | |
| DATE 5/11/72 | | DATE 5/15/72 | | 1 | | | | | | | | | | | | | | | | |
| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | | | | | | | | | | | | | | | | | | |
| 1 | C-IA-5408776-0-0 | PRIORITY JUMPER LEVEL #4 | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | |
| 2 | C-IA-5408778-0-0 | PRIORITY JUMPER LEVEL #5 | | | - | - | - | - | - | | | | | | | | | | | |
| 3 | D-UA-BC05C-25 | CABLE, MODEM BC05C | | | - | 1 | - | 1 | 1 | | | | | | | | | | | |
| 4 | D-IA-7008360-0-0 | CABLE ASSEMBLY (KL8E) | | | 1 | - | 1 | - | - | | | | | | | | | | | |
| 5 | D-CS-H315-0-1 | MODEM TEST CONNECTOR | | | - | - | - | - | A/R | See Note 2 | | | | | | | | | | |
| 6 | E-CS-M7800-0-1 | ASYNCHRONOUS LINE INTERFACE | | | - | 1 | - | 1 | 1 | | | | | | | | | | | |
| 7 | A-PL-G8000-0-0 | FILTER NETWORK | | | - | A/R | - | A/R | A/R | See Note 1 | | | | | | | | | | |
| 8 | | CRYSTAL | | | A/R | A/R | A/R | A/R | A/R | See Note 3 | | | | | | | | | | |
| 9 | E-CS-M7800-YA-1 | ASYNCHRONOUS LINE INTERFACE | | | 1 | - | 1 | - | - | | | | | | | | | | | |
| | NOTES: | 1. G8000 IS REQUIRED ONLY IN PDP 11 SYSTEMS WHERE +15V IS NOT AVAILABLE. ONE PER DD11-A. | | | | | | | | | | | | | | | | | | |
| | | 2. ONE H315 PER PDP11 SYSTEM | | | | | | | | | | | | | | | | | | |
| | | 3. CRYSTAL FREQUENCY DEFINED BY CUSTOMER SPECIFIED BAUD RATE | | | | | | | | | | | | | | | | | | |
| | | 4. APPLY TAPE TO TOP SURFACES OF CRYSTAL AND MOUNTING BRACKETS TO INSULATE FROM ADJACENT MODULES. | | | | | | | | | | | | | | | | | | |
| 10 | 9008269 | TRANSPARENT VINYL TAPE | | | A/R | | | | | | | | | | | | | | | |
| TITLE | | ASSY NO. | | SIZE | CODE | NUMBER | | REV. | ECO NO. | | | | | | | | | | | |
| ASYNCHRONOUS LINE INTERFACE | | C-UA-DL11-0-0 | | A | PL | DL11-0-0 | | D | DL11-0000 | | | | | | | | | | | |
| SHEET 1 OF 1 | | | | DIST. | G | | | | | | | | | | | | | | | |

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- NOTES:
- 1.) PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE SYSTEM UNIT. MODULE REFERENCE ALONE IS OBTAINED BY CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT THE LEFT.
 - 2.) NUMBERS TO BE USED AT CONNECTIONS A3-A10, J4-J6, J8-J10, V3-V8, AND W1.
 - 3.) LETTERS ENCLOSED IN PARENTHESIS REFER TO PINS ON THE BERG CONNECTOR. EXAMPLE: (X).
 - 4.) ON ITEM NO.23, ALL 7 CHIPS MUST BE EITHER DEC 380'S OR ITS SUBSTITUTE I1380 IC'S. A DEC 380 AND I1380 MIXTURE OF THESE 7 CHIPS IS NOT ALLOWED. E28 MUST BE A DEC 380. (ITEM NO.68).

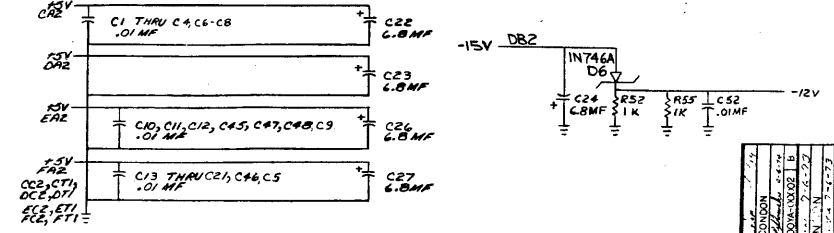
PIN NOMENCLATURE
MODULE SYSTEM UNIT

| ORIG. PART NO. | SUBSTITUTE DESCRIPTION | PART NO. | ITEM NO. |
|----------------|------------------------|----------|----------|
| I909485 | IC I1380 | I911113 | 23 |

| ITEM | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|------|-----------------------|------------------------------|-------------|----------|
| 1 | E28 | IC DEC 380 | I909485 | 148 |
| 1 | R3 | RES 750Ω 1/4W 5% | I301401 | 87 |
| 1 | R3B | RES 390Ω 1/4W 5% | I300309 | 66 |
| 1 | D1 | DIODE 1N24G | I104860 | 65 |
| 2 | Q1, Q2 | TR ANSISTOR 2N334 | I504006 | 64 |
| 1 | C33 | CAP 100P 100V 5% MFR | I000016 | 63 |
| 1 | C34 | CAP 560P 100V 5% MFR | I000025 | 62 |
| 1 | C30, C31 | CAP .047MFD CERAMIC | I000678 | 61 |
| 1 | E27 | IC DEC 74161 | I910650 | 60 |
| 2 | C34, C35 | CAP 330P 100V 5% DIPPED MFR | I000039 | 59 |
| 1 | C32 | CAP 100P 100V 5% DIPPED MFR | I000029 | 58 |
| 1 | C31 | CAP 100P 100V 5% DIPPED MFR | I000012 | 57 |
| 2 | Q1, Q2, C30A5-C30C2 | CAP 100P 100V 5% MFR | I000010 | 56 |
| 1 | C30 | CAP .01MFD 50V 5% TANT | I000015 | 55 |
| 5 | C22-C26, C27 | CAP .047MFD 50V 5% TANT | I000017 | 54 |
| 1 | C33 | CAP 100P 100V 5% DIPPED MFR | I000019 | 53 |
| 2 | R14, R15 | RES 1.5K 1/4W 5% | I300394 | 52 |
| 2 | R23, R24, R25 | RES 1K 1/4W 5% | I300305 | 51 |
| 1 | R41 | RES 47Ω 1/4W 5% | I300202 | 50 |
| 1 | R10 | RES 68Ω 1/4W 10% | I300220 | 49 |
| 1 | R3 | RES 82Ω 1/4W 5% | I301417 | 48 |
| 1 | R2 | RES 100Ω 1/4W 5% | I300259 | 47 |
| 1 | R11 | RES 150Ω 1/4W 5% | I300250 | 46 |
| 1 | R22 | RES 180Ω 1/4W 5% | I301322 | 45 |
| 1 | R1 | RES 220Ω 1/4W 5% | I300271 | 44 |
| 1 | R1-DE | RES 220Ω 1/4W 5% MFR | I300314 | 43 |
| 3 | R2, R3, R51 | RES 270Ω 1/4W 5% | I300311 | 42 |
| 1 | R4 | RES 360Ω 1/4W 5% | I300338 | 41 |
| 3 | R16 | RES 470Ω 1/4W 5% | I300355 | 40 |
| 1 | R16 | NUT HEX #2-56 | I000655 | 39 |
| 1 | R16, R6, R7, R11-R20 | RES 500Ω 1/4W 5% | I300385 | 38 |
| 24 | R25, R27-R34, R39 | RES 10K 1/4W 5% | I300477 | 36 |
| 1 | R20, R22 | RES 1.5K 1/4W 5% | I300391 | 37 |
| 1 | R2 | RES 10K PART | I904399 | 35 |
| 4 | E22, E33, E61, E62 | IC DEC 7474 | I905547 | 34 |
| 2 | E36, E41 | IC DEC 8242 | I909712 | 34 |
| 3 | E3, E29, E39 | IC DEC 7408 | I910155 | 33 |
| 1 | E20, E26 | SEMIBUILDING BLOCK 2-56X.250 | I000001 | 32 |
| 1 | E20, E26 | IC DEC 7400 | I909004 | 31 |
| 11 | E12, E3, E7-E9, E11 | IC DEC 8881 | I909705 | 30 |
| 1 | E30, E47, E54, E56 | AUSAT 801-2 RS-1 | I000012 | 29 |
| 2 | E43 | IC DEC 74123 | I904396 | 28 |
| 3 | E18, E27, E32 | IC DEC 74174 | I909667 | 28 |
| 3 | E22, E34, E38 | IC DEC 7400 | I903375 | 24 |
| 1 | E20 | IC DEC 7473 | I909989 | 23 |
| 2 | E20, E33 | IC DEC 7402 | I909004 | 24 |
| 7 | E3, E4, E33, E35, E40 | IC DEC 380 | I909485 | 23 |
| 1 | E45, E46 | IC DEC 74153 | I909937 | 22 |
| 1 | E20 | IC DEC 74108 | I909939 | 21 |
| 1 | E25 | IC DEC 7402 | I909133 | 20 |
| 4 | E1, E13, E38, E39 | IC DEC 7404 | I909486 | 19 |
| 1 | E24 | IC DEC 7493 | I909054 | 18 |
| 1 | E29 | IC DEC 7410 | I903376 | 17 |
| 1 | E29 | IC DEC 314 | I909724 | 16 |
| 1 | E37 | IC DEC 7442 | I900674 | 15 |
| 1 | E22 | IC DEC 8271 | I909615 | 14 |
| 2 | E13, E14 | IC DEC 7475 | I906651 | 13 |
| 1 | E1 | BRACKET CRYSTAL HOLDER | I300285 | 12 |
| 1 | E1 | BRACKET CRYSTAL HOLDER | I300314 | 11 |
| 1 | E17 | IC SOCKET | I000338 | 10 |
| 2 | S1, S2 | SWITCH SINGLE POLE 10 POS | I210042-1 | 9 |
| 1 | E1 | NO PIN CONNECTOR BERG | I209941 | 8 |
| 1 | E1 | SOCKET LUGS | I909735 | 7 |
| 1 | E1 | EYELET #054-7 E.B. STIMPSON | I906732 | 6 |
| 1 | E1 | HANDLE FLIP-CHIP MARGENTA | I908337-06 | 5 |
| 1 | E1 | ETCHED CIRCUIT BOARD | I3009972 | 4 |
| 1 | E1 | WAXABLE ESD HISTORIC | I909999/046 | 3 |
| 1 | E1 | ASSY/DRILLING HOLE LAYOUT | I909999/046 | 3 |
| 1 | E1 | X-Y COORDINATE HOLE | I909999/046 | 3 |

*SEE ALLOWABLE SUBSTITUTION LIST & NOTE 4.

| DEC # | REV | DESCRIPTION |
|-----------|-----|-------------|
| DEC 74141 | B | 16 |
| DEC 74175 | 3 | 1 |
| DEC 74175 | B | 16 |
| DEC 8271 | B | 16 |
| DEC 7442 | B | 16 |
| DEC 314 | 1 | 8 |
| DEC 7493 | 10 | 5 |
| DEC 7492 | 10 | 5 |
| DEC 74153 | B | 16 |
| DEC 380 | 1 | 8 |
| DEC 7490 | 15 | 5 |
| DEC 74123 | B | 16 |



IC PIN LOCATIONS

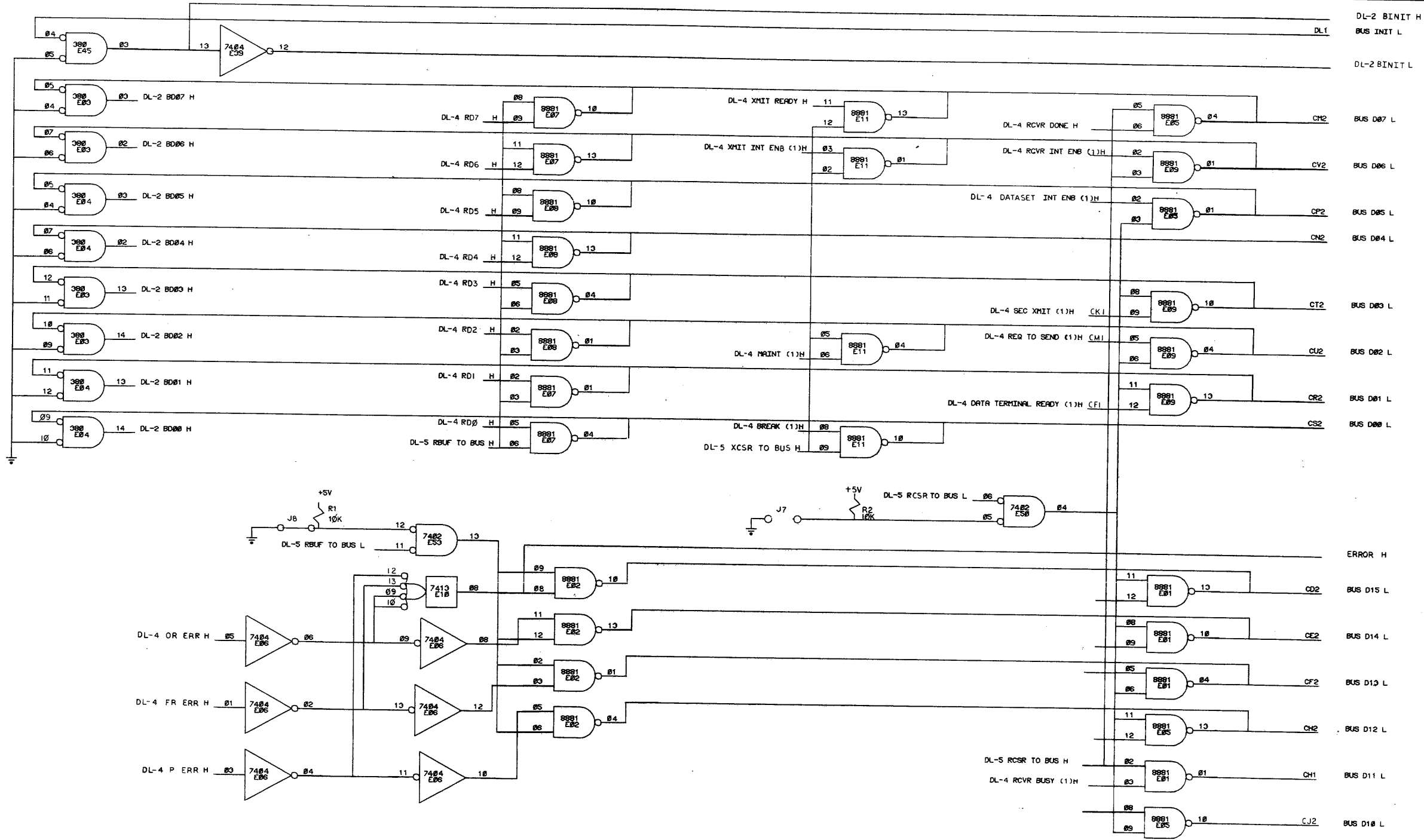
| DEC NO. | EIA NO. | DEC NO. | EIA NO. |
|---------|-----------|---------|---------|
| IN746A | 114M3.3A2 | D46A | 1N3602 |

SEMICONDUCTOR CONVERSION CHART

ASYNCHRONOUS LINE INTERFACE

EKS M7800-1A-1

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D
C
B
A

| REVISIONS | | |
|-----------|------------|------|
| CHK. | CHANGE NO. | REV. |
| | | |

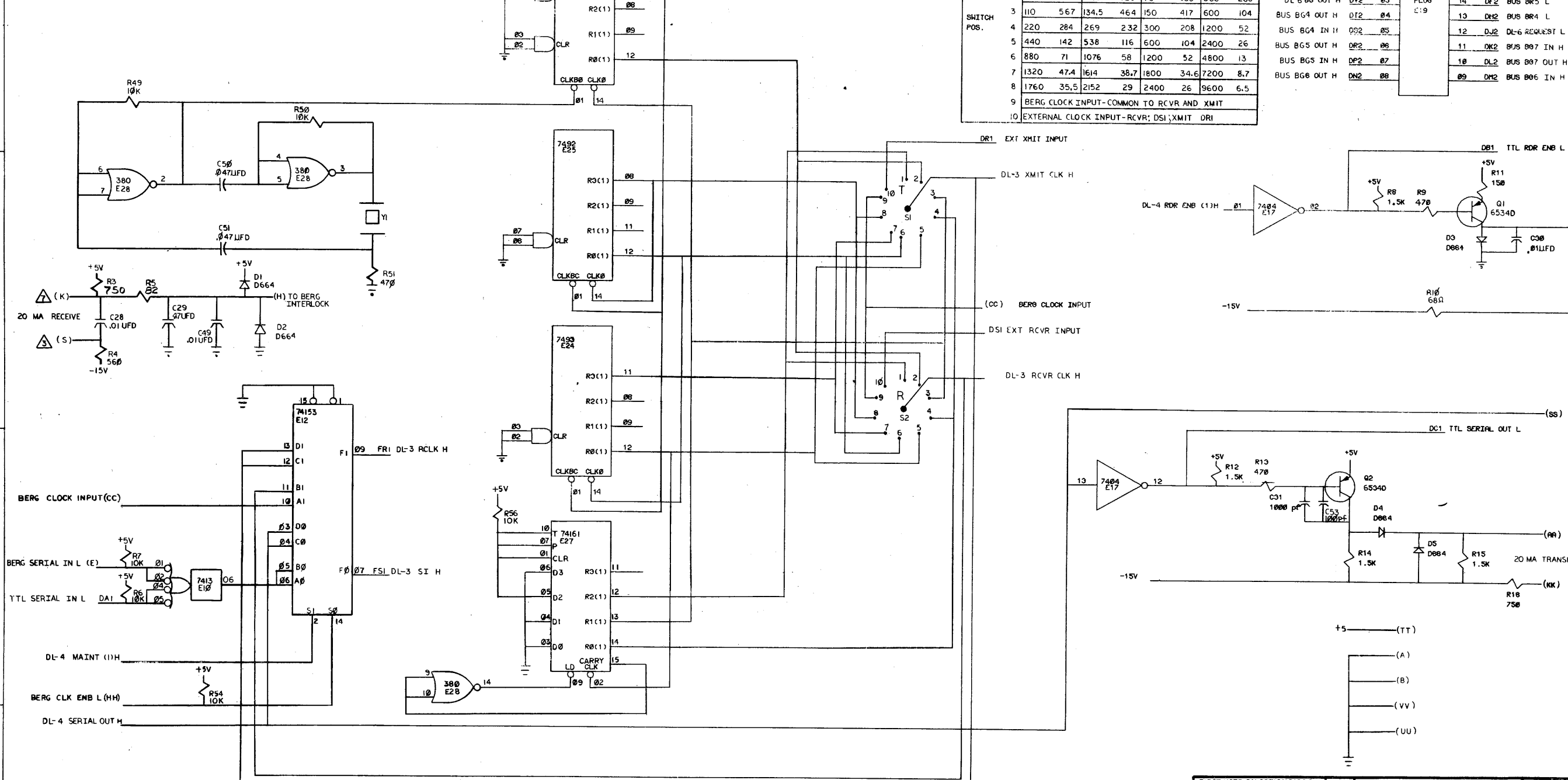
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|-----------|--|
| DL11 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX - .005 | ±0° 30' | DRN | DATE | digital CORPORATION MATTAPOI, MASSACHUSETTS TITLE ASYNCHRONOUS LINE INTERFACE (BUS RECEIVERS & DRIVERS) DL-2 |
| .XX - .002 | | CHK | DATE | |
| .X - .001 | | APP | DATE | |
| | | PROG | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROG. | DATE | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | SCALE | SIZE CODE | NUMBER |
| | | SHEET | DIST. | REV. |

8 7 6 5 4 3 2 1

3 7 6 5 4 3 2 1

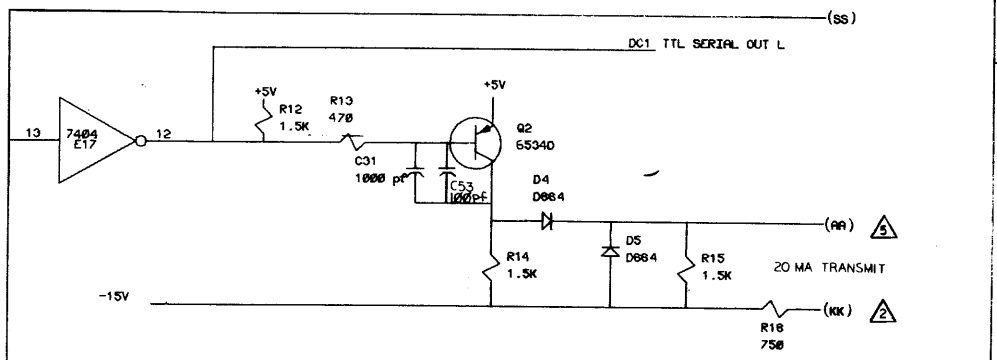
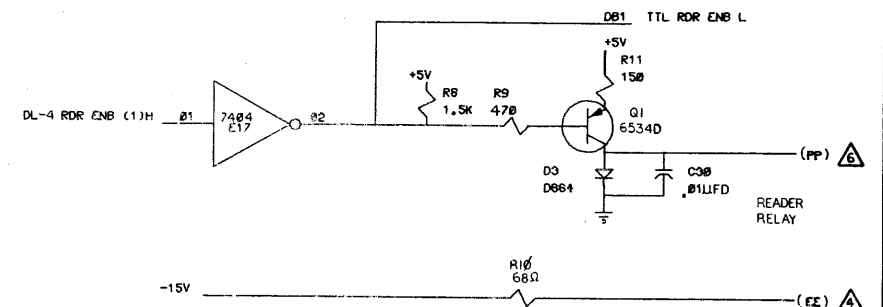
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| Y1 | 944.8 KHZ | 103296 MHZ | 1452 MHZ | 4608MHZ |
|----|--|------------|-----------|-----------|
| | BAUD USEC | BAUD USEC | BAUD USEC | BAUD USEC |
| 1 | 36.7 1700 | 44.8 1342 | 50 1250 | 200 31.2 |
| 2 | 55 1135 | 67.3 928 | 75 833 | 300 208 |
| 3 | 110 567 | 134.5 464 | 150 417 | 600 104 |
| 4 | 220 284 | 269 232 | 300 208 | 1200 52 |
| 5 | 440 142 | 538 116 | 600 104 | 2400 26 |
| 6 | 880 71 | 1076 58 | 1200 52 | 4800 13 |
| 7 | 1320 47.4 | 1614 38.7 | 1800 34.6 | 7200 8.7 |
| 8 | 1760 35.5 | 2152 29 | 2400 26 | 9600 6.5 |
| 9 | BERG CLOCK INPUT-COMMON TO RCVR AND XMIT | | | |
| 10 | EXTERNAL CLOCK INPUT-RCVR: DSI; XMIT DRI | | | |

| | DL-3 RDR IN H | DL-6 RDR OUT H | BUS BG4 OUT H | BUS BG4 IN H | BUS BG5 OUT H | BUS BG5 IN H | BUS BG6 OUT H |
|-----|---------------|----------------|---------------|--------------|---------------|--------------|---------------|
| DL1 | D12 | DV2 | DT2 | DS2 | DR2 | DP2 | DN2 |
| DL2 | D11 | DV1 | DT1 | DS1 | DR1 | DP1 | DN1 |
| DL3 | D10 | DV0 | DT0 | DS0 | DR0 | DP0 | DN0 |



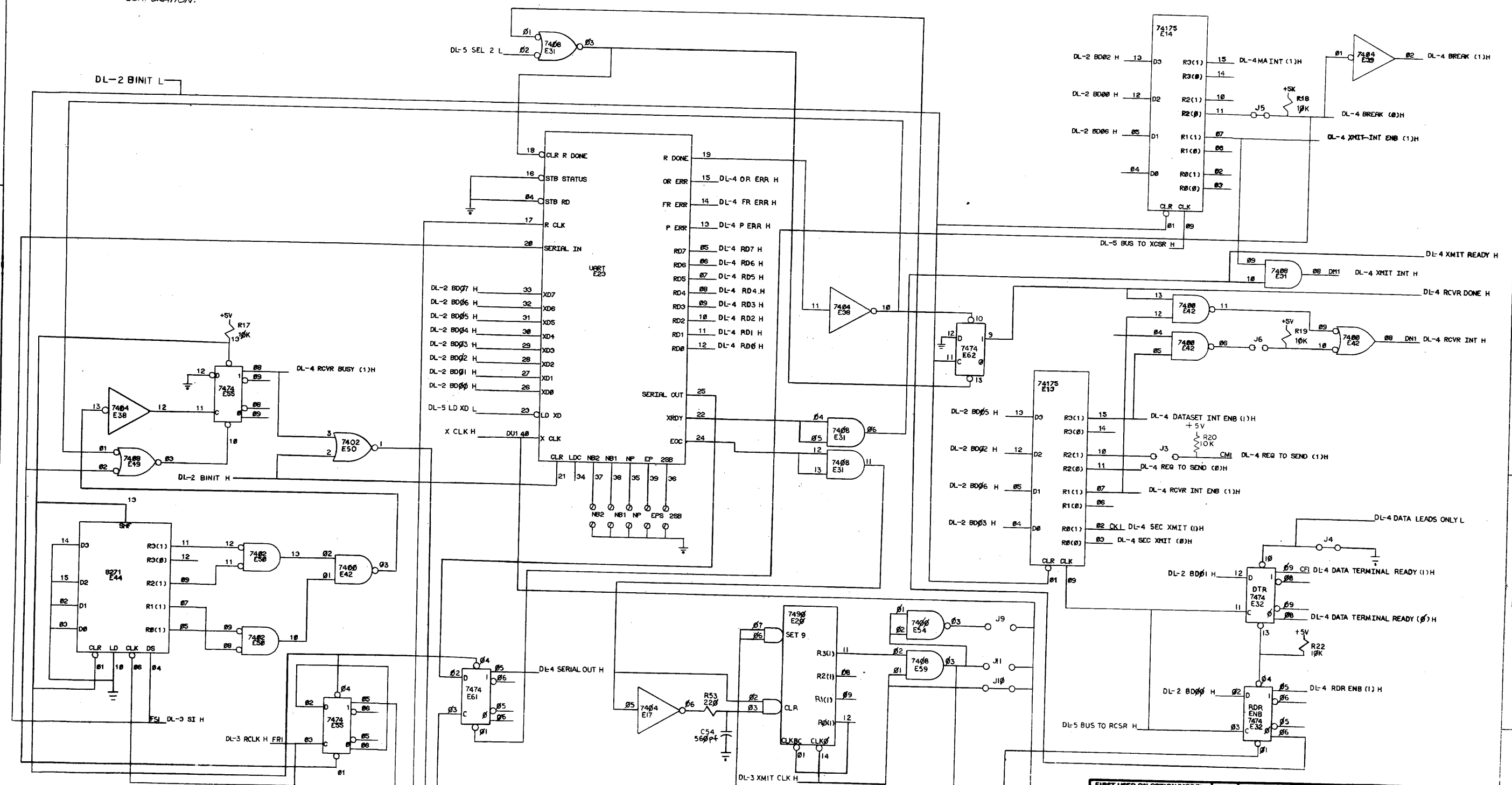
| REVISIONS | | |
|-----------|------------|------|
| CHK. | CHANGE NO. | REV. |
| | | |
| | | |

NOTES:
 1. LETTERS ENCLOSED IN PARENTHESIS REFER TO PINS ON THE BERG CONNECTOR. EXAMPLE: (X)
 2. NUMBERS WITHIN TRIANGLES REFER TO PINS ON THE FEMALE MATE-N-LOCK CONNECTOR WHEN USING THE 'DUAL-IN-LINE' TABLE. THE TABLE ALSO CONNECTS BERG PINS 4 TO 5.

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|----------------------------|------|-------------|--|----------|
| DL11 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED | DATE | DATE | DIGITAL EQUIPMENT CORPORATION | |
| DIMENSIONS IN INCHES | | | ASYNCHRONOUS LINE INTERFACE (CLOCK & CURRENT LOOPS) DL-3 | |
| FINISH | | | | |
| SHEET 3 OF 3 | | DIST. | M7800-YA-1 | |

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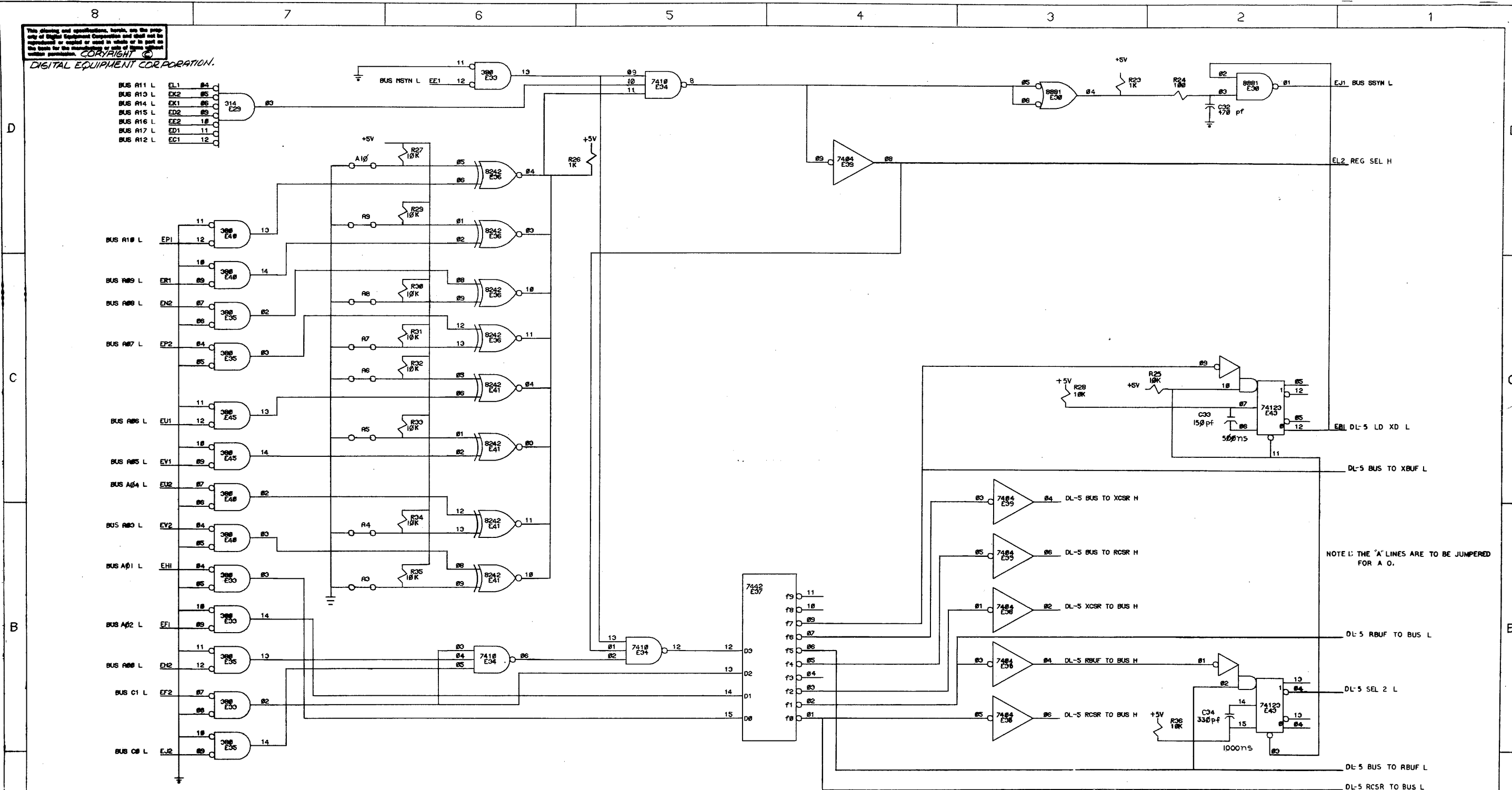


| REVISIONS | |
|-----------|------|
| CHK. | REV. |
| | |
| | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------|----------|----------|
| DL11 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | | | |
| XXX - .006 | 20' 30" | | | |
| XX - .02 | | | | |
| X - .1 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | | | |
| FINISH | SCALE | | | |
| | SHEET 4 OF 6 | | | |

| PARTS LIST | | TITLE | |
|------------|-----------------------|---|------|
| digital | EQUIPMENT CORPORATION | ASYNCHRONOUS LINE INTERFACE (UART & STATUS) | |
| | | DL-4 | |
| SIZE CODE | NUMBER | SCALE | REV. |
| DCS | M7800-YA-1 | | B |
| DIST. | | | |

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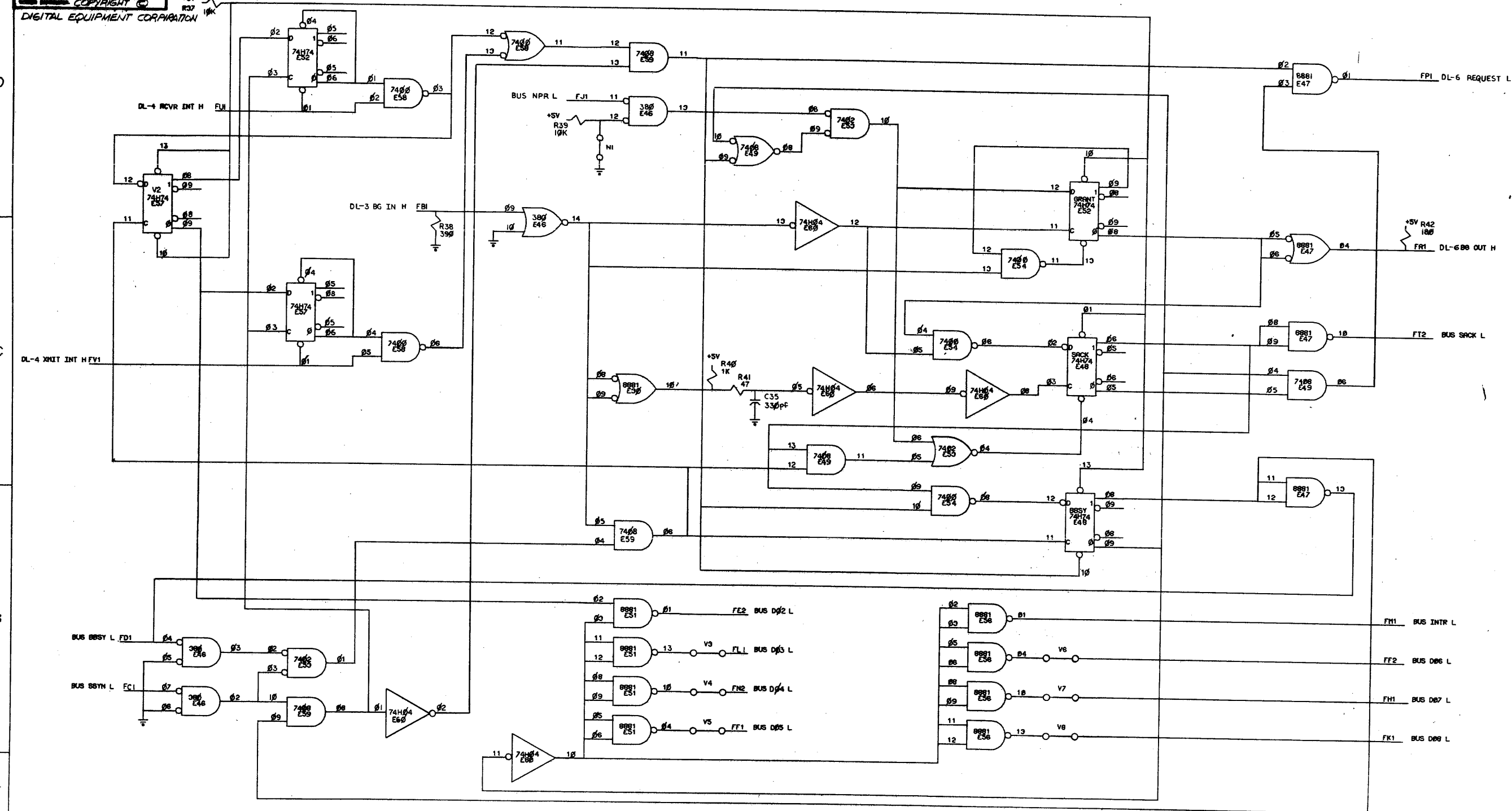
NOTE: THE 'A' LINES ARE TO BE JUMPED FOR A 0.

| REVISIONS | | |
|-----------|------------|------|
| CHK. | CHANGE NO. | REV. |
| | | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|------|-------------------|----------|----------|
| DL11 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | | ANGLES | | |
| .XXX - .008 | | ±0° 30' | | |
| .XX - .02 | | | | |
| .X - .1 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| | | | | |
| FINISH | | SCALE | | |
| | | | | |
| SHEET 5 OF 6 | | D CS M7800-YA-1 | | REV. B |

TITLE ASYNCHRONOUS LINE INTERFACE (ADDRESS SELECTION) DL-5

DIGITAL EQUIPMENT CORPORATION



NOTE: THE 'V' LINES ARE TO BE JUMPED FOR A. I.

| REVISIONS | | |
|-----------|------------|------|
| CHK. | CHANGE NO. | REV. |
| | | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|------|-------------|----------|----------|
| DL11 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | | | | |
| ANGLES | | | | |
| .XXX - .005 | | | | |
| .XX - .02 | | | | |
| .X - .1 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | | | |
| FINISH | | | | |
| PARTS LIST | | | | |
| TITLE: ASYNCHRONOUS LINE INTERFACE (INTERRUPT CONTROL) DL-6 | | | | |
| D CS M7800-YA-1 | | | | |
| SHEET 6 OF 6 | | | | |
| REV. B | | | | |

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

QUANTITY / VARIATION

| | | | | |
|-------------|------------|---------|-------------|--------------|
| MADE BY EMP | Pellegrini | CHECKED | P. Janson | SECTION |
| DATE | 8/29/72 | DATE | 8-29-72 | |
| ENG | P. Janson | PROD | J. M. Kelly | ISSUED SECT. |
| DATE | 8/29/72 | DATE | 8-31-72 | |

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | DL11-A | DL11-B | DL11-C | DL11-D | DL11-E | KIT CHECK | BY | DATE | INSTALLATION CHECK | BY | DATE |
|----------|---------------------|--------------|--------|--------|--------|--------|--------|-----------|----|------|--------------------|----|------|
| 1 | LIBKIT-11-KL11-04 | KL11 MAINDEC | 1 | 1 | 0 | 0 | 0 | | | | | | |
| 2 | LIBKIT-11-DL11C-A-K | DL11 MAINDEC | 0 | 0 | 1 | 1 | 0 | | | | | | |
| 3 | LIBKIT-11-DL11E-A-K | DL11 MAINDEC | 0 | 0 | 0 | 0 | 1 | | | | | | |
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|-------|--------------------|-----------|--------|-----------|------|--------|----------|------|--|--------|--|
| TITLE | DL11 SOFTWARE LIST | ASSY. NO. | | SIZE CODE | A SL | NUMBER | DL11-0-4 | REV. | | ECO NO | |
| | | SHEET | 1 OF 1 | DIST. | | | | | | | |

DEC FORM NO. DEC 16 (227) 1049 3471
DRA 120

| DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | | LEGEND | | QUANTITY / VARIATION | | | | | | | | | | | | |
|--|---------------------|--|------------------|--------------|----------------------|-------------------------|--------|--------|------------|--|--|-----------|----|------|--------------------|----|------|
| ACCESSORY LIST | | | D | DOCUMENT | DL11-A | DL11-B | DL11-C | DL11-D | DL11-E | | | | | | | | |
| MADE BY | E. Pellegrini | CHECKED | <i>P. Janson</i> | SECTION | PA | PAPER TAPE ASCII | | | | | | | | | | | |
| DATE | June 26, 1972 | DATE | 8-8-72 | | PB | PAPER TAPE BINARY | | | | | | | | | | | |
| ENG | Paul Janson | PROD. | <i>P. Janson</i> | ISSUED SECT. | PM | PAPER TAPE READ-IN-MODE | | | | | | | | | | | |
| DATE | June 26, 1972 | DATE | 8-8-72 | | | | | | | | | | | | | | |
| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | | | DL11-A | DL11-B | DL11-C | DL11-D | DL11-E | | | KIT CHECK | BY | DATE | INSTALLATION CHECK | BY | DATE |
| 1 | M7800 | ASYNCHRONOUS LINE INTERFACE (EIA) | | | - | 1 | - | 1 | 1 | | | | | | | | |
| 2 | G8000 | FILTER NETWORK | | | 0 | A/R | 0 | A/R | 0 | | | | | | | | |
| 3 | M7800-YA | ASYNCHRONOUS LINE INTERFACE (CURRENT LOOP) | | | 1 | 0 | 1 | 0 | 0 | | | | | | | | |
| 4 | 5408776 | PRIORITY JUMPER LEVEL #4 | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 5 | BC05-C-25 | MODEM CABLE | | | 0 | 1 | 0 | 1 | 1 | | | | | | | | |
| 6 | 7008360 | TTY CABLE | | | 1 | 0 | 1 | 0 | 0 | | | | | | | | |
| 7 | - | CRYSTAL | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 8 | - | DL11 ENGINEERING DRAWINGS | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 9 | DEC-11-HDLAA-A-D | DL11 ASYNCHRONOUS LINE INTERFACE MANUAL | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 10 | LIBKIT-11-KL11-04 | KL11 MAINDEC | | | 1 | 1 | 0 | 0 | 0 | | | | | | | | |
| 11 | LIBKIT-11-DL11C-A-K | DL11 MAINDEC | | | 0 | 0 | 1 | 1 | 0 | | | | | | | | |
| 12 | LIBKIT-11-DL11E-A-K | DL11 MAINDEC | | | 0 | 0 | 0 | 0 | 1 | | | | | | | | |
| 13 | H315 | MODEM TEST CONNECTOR | | | 0 | 0 | 0 | 0 | A/R | | | | | | | | |
| NOTES: 1. G8000 IS REQUIRED ONLY IN PDP-11 SYSTEMS WHERE +15V IS NOT AVAILABLE. ONE PER DD11-A. | | | | | | | | | | | | | | | | | |
| 2. CRYSTAL FREQUENCY DEFINED BY CUSTOMER SPECIFIED BAUD RATE. | | | | | | | | | | | | | | | | | |
| 3. ONE H315 PER PD11 SYSTEM | | | | | | | | | | | | | | | | | |
| 4. INSURE THAT TRANSPARENT VINYL TAPE HAS BEEN APPLIED TO THE TOP SURFACE OF THE CRYSTAL AND MOUNTING BRACKET. | | | | | | | | | | | | | | | | | |
| TITLE | | | ASSY. NO. | SIZE CODE | NUMBER | | | REV. | ECO NO | | | | | | | | |
| DL11 CHECK LIST | | | | A AL | DL11-0-5 | | | C | DL11-00005 | | | | | | | | |
| | | | SHEET 1 OF 1 | DIST. | | | | | | | | | | | | | |

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**DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS**

DATE 6-21-72

TITLE DL11 INSTALLATION PROCEDURE

REVISIONS

| REV | DESCRIPTION | CHG NO | ORIG | DATE | APPD BY | DATE |
|-----|----------------|--------|--------|------|------------------|---------|
| C | CHANGE PER ECO | DL11-4 | JANSON | 3/73 | <i>P. Janson</i> | 4-6-73 |
| D | CHANGE PER ECO | DL11-5 | CONDON | 7/73 | <i>L. Condon</i> | 8/8/73 |
| E | CHANGE PER ECO | DL11-7 | CONDON | 8/74 | <i>L. Condon</i> | 8/21/74 |

| | | | | | |
|------------------------------|-------------------------------|------------------|------------|------------------|----------|
| ENG <i>Paul E. Janson</i> | APPD <i>Paul E. Janson</i> | SIZE A | CODE SP | NUMBER DL11-2 | REV 1 |
|------------------------------|-------------------------------|------------------|------------|------------------|----------|

DEC FORM NO
DRA 107A

ENGINEERING SPECIFICATION

CONFIGURATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

DL11 INSTALLATION PROCEDURE:

Installation of the M7800 module or its variation to a DL11-A through DL11-E option consists of the following:

1. Jumper insertion/deletion for selection of operation mode (A, B, C, D, or E).
 2. Register address assignment.
 3. Vector address assignment.
 4. Priority assignment.
 5. Special NPR jumper insertion/deletion.
 6. Selection of data format (data bits, stop bits, parity).
 7. Selection of crystal for baud rate.
 8. Installation of G8000 in systems where +15v is not available.
 9. Filter capacitor selection for high baud rate current-loop.
- A. OPERATION MODE:

The following describes the jumpers associated with controlling the mode of operation (A,B,C,D, or E):

- J1. Ties EIA driver to REQUEST-TO-SEND lead (pin 4) of dataset cable. IN for DL11-B,D, and E; does not affect DL11-A and C. Drawing DL-7.
- J2. Ties EIA driver, normally used for the REQUEST-TO-SEND lead, to FORCE BUSY lead (pin 25) for use with Bell 103E. This is a customer option. If not specified, jumper is OUT for all DL11's. Drawing DL-7.
- J3. When inserted, allows REQUEST-TO-SEND lead (pin 4) to be controlled by bit 2 of the receiver status register. OUT for DL11-B and D; IN for DL11-E; does not affect DL11-A and C. Drawing DL-4.
- J4. When inserted, forces "DATA LEADS ONLY" mode of EIA operation. Turns DATA TERMINAL READY (pin 20) and REQUEST-TO-SEND (pin 4) on. IN for DL11-B and D; OUT for DL11-E; does not affect DL11-A and C. Drawing DL-4.
- J5. When inserted, allows the BREAK bit to function. OUT for DL11-A and B; IN for DL11-C,D, and E. Drawing DL-4.
- J6. When inserted, allows DSET INT to cause interrupts. OUT for DL11-A,B,C and D; IN for DL11-E. Drawing DL-4.
- J7. When inserted, allows dataset control bits to be read as part of the receiver status register.

| | | | |
|------------------|------------|------------------|----------|
| SIZE A | CODE SP | NUMBER DL11-2 | REV 1 |
|------------------|------------|------------------|----------|

DEC FORM NO DEC 16-(381)-1022-N370
DRA 108

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

J7. (con't)

OUT for DL11-A,B,C and D; IN for DL11-E.
Drawing DL-2.

J8. When inserted, allows error bits to be read as part of the receiver data register. OUT for DL11-A and B; IN for DL11-C,D and E.
Drawing DL-2.

Summary of mode control jumpers:

| JUMPER | A | B | C | D | E | DRAWING |
|--------|-----|-----|-----|-----|-----|---------|
| J1 | * | IN | * | IN | IN | DL-7 |
| J2 | OUT | OUT | OUT | OUT | OUT | DL-7 |
| J3 | * | OUT | * | OUT | IN | DL-4 |
| J4 | * | IN | * | IN | OUT | DL-4 |
| J5 | OUT | OUT | IN | IN | IN | DL-4 |
| J6 | OUT | OUT | OUT | OUT | IN | DL-4 |
| J7 | OUT | OUT | OUT | OUT | IN | DL-2 |
| J8 | OUT | OUT | IN | IN | IN | DL-2 |

*= don't care

B. REGISTER ADDRESS ASSIGNMENTS:

The DL11 can respond to addresses with the following format:

| | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|
| 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | |

Selects 1 of 4 Registers

Byte Control

Bits 10 through 3 are controlled by jumpers A10 to A3. A jumper inserted indicates a zero.

For the DL11-A and B used as the console device, address 777560 is assigned. For additional units, assign 776XX0, where XX=50 for the first additional unit and XX=67 for the 16th unit.

For the DL11-C,D and E assign address 77XXX0, where XXX=561 for the first line, and XXX=617 for the 31st line. Assign all C's first, then D's, and then E's.

| | | | |
|------|------|----------|-----|
| SIZE | CODE | NUMBER | REV |
| A | SP | DL11-022 | E |

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

G. VECTOR ADDRESS ASSIGNMENT:

Jumpers V8 through V3 control the interrupt vector. A jumper inserted provides a vector bit of one. Vectors can be produced in the form XX0 and XX4, where XX ranges from 00 to 77.

For the DL11-A and B used as a console device the vector address is 060/064. For additional units, vectors are floating.

For the DL11-C,D, and E vector addresses are floating. Assign all C's first, then D's, then E's.

D. PRIORITY ASSIGNMENT:

Interrupt priority is established by inserting a "priority plug" in the socket at IC location E19. For DL11-A,B,C,D and E use level 4.

SUMMARY OF REGISTER, VECTOR AND PRIORITY ASSIGNMENTS:

| | ADDRESS | VECTOR | PRIORITY |
|---------------------------------|--------------------------------------|----------|----------|
| DL11-A,B CONSOLE | 777560 777562 777564 777566 | 60/64 | BR4 |
| DL11-A,B ADDITIONAL UNITS | 776XX0 776XX2 776XX4 776XX6 | Floating | BR4 |

Where XX= 50 for line #1
and XX= 67 for line #16

| | ADDRESS | VECTOR | PRIORITY |
|------------|--------------------------------------|----------|----------|
| DL11-C,D,E | 77XXX0 77XXX2 77XXX4 77XXX6 | Floating | 4 |

Where XXX= 561 for line #1
and XXX= 617 for line #31

| | | | |
|------|------|----------|-----|
| SIZE | CODE | NUMBER | REV |
| A | SP | DL11-0-2 | E |

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

E. SPECIAL NPR JUMPER:

Jumper N1, shown on drawing DL-6, controls the response of the interrupt circuit to an NPR request. The jumper should normally be IN, except for 11/20 and 11/15 systems without the KH11 option.

F. SELECTION OF DATA FORMAT:

1. Data Bits

Split lug pairs NB2 and NB1 control the number of data bits in the serial character as follows:

| NB2 | NB1 | # OF DATA BITS |
|-----|-----|----------------|
| OUT | OUT | 8 |
| OUT | IN | 7 |
| IN | OUT | 6 |
| IN | IN | 5 |

2. Parity

Parity is controlled by split lug pairs NP and EPS as follows:

| NP | EPS | PARITY |
|-----|-----|--------|
| OUT | OUT | OFF |
| OUT | IN | OFF |
| IN | OUT | EVEN |
| IN | IN | ODD |

3. Stop Bits

Split lug pair 2SB and jumpers J9, J10 and J11 control the number of stop bits in the serial character as follows:

| 2SB | J9 | J10 | J11 | # OF STOP BITS |
|-----|-----|-----|-----|----------------------------------|
| OUT | OUT | IN | OUT | 2 |
| IN | OUT | IN | OUT | 1 |
| IN | OUT | OUT | IN | 1.5 for TI, GI, and SCM UARTS |
| IN | IN | OUT | OUT | 1.5 for WD UARTS |

G. CRYSTAL SELECTION:

The clocking scheme of the DL11 consists of a single crystal oscillator feeding a divider network, with two 10-position switches tapping various points to feed into the UART's

| | | | |
|-----------|------------|--------------------|----------|
| SIZE A | CODE SP | NUMBER DL11-0-2 | REV E |
|-----------|------------|--------------------|----------|

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

G. Con't

transmitter and receiver sections. Thus, for a given crystal frequency, 8 baud rates are independently selectable for transmit and receive. The two addition switch positions select external clocks.

| SPEED GROUP | | 1 | 2 | 3 | 4 |
|-------------|--------|--------------|----------|--------|--------|
| | | CRYSTAL (HZ) | | | |
| POSITION | FACTOR | 844.8K | 1.03296M | 1.152M | 4.608M |
| 1* | 23040 | 36.7 | 44.8 | 50 | 2200 |
| 2 | 15360 | 55 | 67.3 | 75 | 300 |
| 3 | 7680 | 110 | 134.5 | 150 | 600 |
| 4 | 3840 | 220 | 269 | 300 | 1200 |
| 5 | 1920 | 440 | 538 | 600 | 2400 |
| 6 | 960 | 880 | 1076 | 1200 | 4800 |
| 7 | 640 | 1320 | 1614 | 1800 | 7200 |
| 8 | 480 | 1760 | 2152 | 2400 | 9600 |

*Most counter-clock wise position.

To determine a crystal frequency for a non-standard baud rate, pick the position of the closest baud rate in the 1.152MHz column, and then multiply the non-standard baud rate by the factor for that position. For example, if the customer specifies 1050 baud, this is closest to 1200 baud, position 6.

$$1050 \times 960 = 10080000 = 1.008\text{MHz.}$$

The crystal frequency should not fall outside the range of the standard crystals.

DEC part numbers for the standard crystals are as follows:

| | |
|-------------|-------------|
| 844.8 KHz | 18-10245-1* |
| 1.03296 MHz | 18-05501-6 |
| 1.152 MHz | 18-05501-5 |
| 4.608 MHz | 18-05501-7 |

*Use A or C cut crystals only. Do not use crystals marked NE-6D.

When ordering a special crystal, refer to purchase specification 18-05501 for crystal specification.

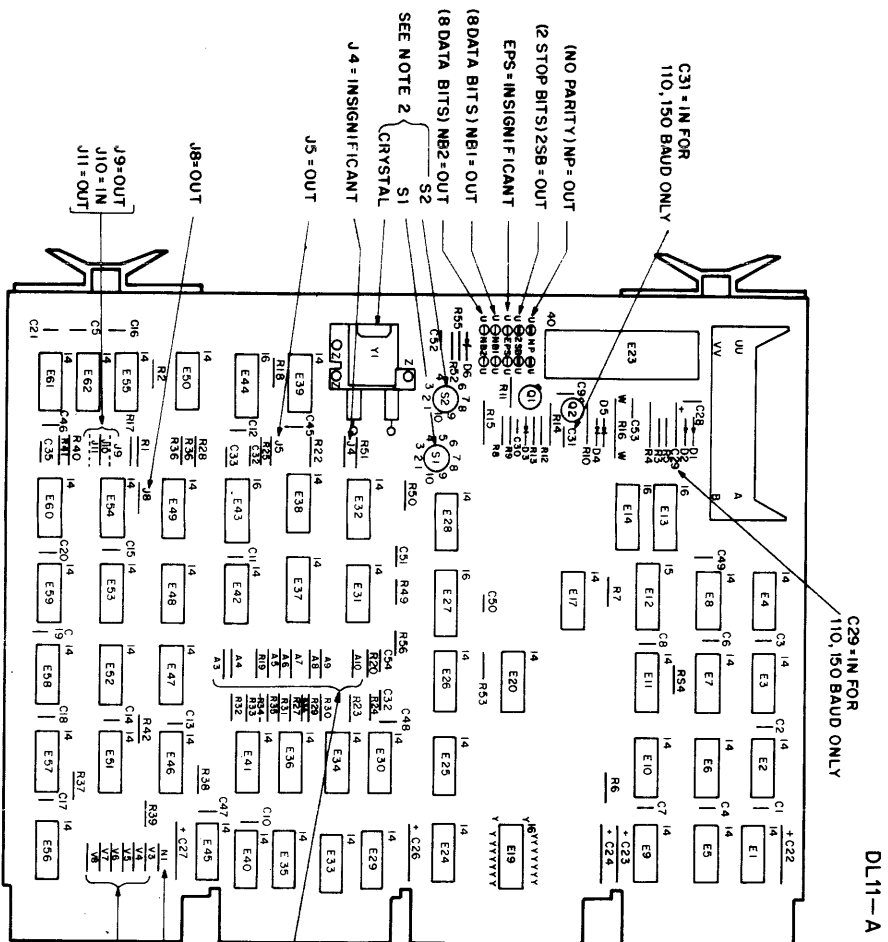
Insure that transparent vinyl tape (9008269) is applied to the top surfaces of the crystal and mounting brackets to insulate from adjacent modules.

| | | | |
|-----------|------------|--------------------|----------|
| SIZE A | CODE SP | NUMBER DL11-0-2 | REV E |
|-----------|------------|--------------------|----------|

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE



- NOTES:
- For further information on the DL11-A configuration or the installation of DL11-B, DL11-C, DL11-D or DL11-E refer to
 - DL11 Asynchronous Line Interface Manual
 - A-SP-DL11-0-2 (DL11 installation procedure) in the DL11 Engineering Drawings.

| SPEED GROUP | BAUD RATE | | | |
|--------------------|-----------|----------|--------|--------|
| | 1 | 2 | 3 | 4 |
| CRYSTAL FREQ (KHZ) | 344.8K | 1.03296M | 1.152M | 4.608M |
| SI, S2 POS. | | | | |
| 1 | 36.7 | 44.8 | 50 | 200 |
| 2 | 55 | 67.3 | 75 | 300 |
| 3 | 110 | 134.5 | 150 | 600 |
| 4 | 220 | 269 | 300 | 1200 |
| 5 | 440 | 538 | 600 | 2400 |
| 6 | 880 | 1076 | 1200 | 4800 |
| 7 | 1320 | 1614 | 1800 | 7200 |
| 8 | 1760 | 2152 | 2400 | 9600 |

Position 1 is most counter-clockwise position.

ADDRESS

N11 (EXCEPT FOR 11/20 & 11/15 SYSTEMS WITHOUT KHI1 OPTION)

VECTOR ADDRESS

II-2484

| | | | |
|------|------|----------|-----|
| SIZE | CODE | NUMBER | REV |
| A | SP | DL11-0-2 | E |